

MIND

A QUARTERLY REVIEW

OF

PSYCHOLOGY AND PHILOSOPHY.

I.—THE CONCEPTION OF IMMORTALITY IN
SPINOZA'S *ETHICS*¹.

BY A. E. TAYLOR.

WE shall find it convenient, in examining the vexed problem of Spinoza's doctrine of the eternity of the mind, to take as our starting-point the brief abstract of his views given in the "Short Treatise of God and Man," which, in all essentials, anticipates the fuller discussion of the *Ethics*. What we are there told (see especially *Korte Verhandelng*, II. 23) amounts to this. The "soul" is an Idea in the "thinking thing" which corresponds to the existence of some object in "Nature," or—as Spinoza would have said at a later stage of his thought—the mind is an Idea in "God" corresponding to and bound up with the presence in Him of a particular modification of the attribute of extension. Consequently, the continued existence of the soul depends in the first instance on the continued existence of the thing or body of which it is, in Spinozistic language, the "Idea"; and it would seem to follow at once that any disturbance of that proper balance of motion and rest which, according to Spinoza, constitutes the identity of a human body sufficiently extensive to put an end to the existence of a human organism, as such, must also terminate once for all the existence of the corresponding soul. With the transformation of the elements which have hitherto combined to form a human

¹ Read (in substance) before the Society of Historical Theology, Oxford, Feb. 6, 1896.

body into some fresh form of extended existence there must necessarily be conjoined the transmutation of the corresponding "Idea in the thinking thing," which has till now been the "soul" of that body, into some new and non-human shape answering to the change in the body. From this general doom of death, however, Spinoza indicates a way of at least partial escape which is open to all who think fit to avail themselves of it. That way of escape is no other than the love of God which arises from true and adequate knowledge. For, with increasing understanding of the nature of God—or, what for the Spinozist is the same, of the Universe and of our own place in it—comes a truer sense of the relative value of things, and a growing freedom from the impotent passions and irrational aims and purposes of the natural man. To understand the order of the Universe aright means to acquiesce in it; to know our own place in it and to estimate rightly our own powers is to be freed from the alternating tyranny of vain hopes and foolish despondencies, and so to be, as far as a man may, happy. Hence Spinoza can maintain that it is by means of true and adequate ideas of the world and of ourselves and the moral freedom they bring in their train that it is possible for the soul to contract a union with God which is no less indissoluble than its original union with that particular mode of extension that we call its body. And so, we learn in the "Short Treatise," while the soul, in so far as its existence depends on that of the body, shares the mortality of the latter, yet in the degree in which it is also at the same time "united with" God who is eternal and unchangeable, it shares His permanence and immutability. In the above *résumé* of Spinoza's doctrine as it appears in the "Short Treatise" we may specially notice the following salient points, all of which will meet us again in the *Ethics*.

(1) The union of the soul with God and its consequent deathlessness in no way interfere with the rigid parallelism of soul and body which requires that in some sense both shall be alike mortal.

(2) The deathlessness asserted by Spinoza, whatever its precise nature, is treated throughout as a kind of life to be entered on and enjoyed here and now, not as something for which we must wait till death or the next world.

(3) It is not conceived of, as in the current belief of Christianity, as equally and originally inherent in all mankind; it has to be acquired by each man for himself, and may be acquired by different men in very varying degrees.

(4) The way to obtain this "Immortality" (*onsterfelijkheid*) is the formation of true and adequate Ideas.

For a fuller statement of these doctrines and a more detailed

account of the immortality here promised we must now turn to the text of the *Ethics*. And in doing so we shall at once be struck by a change in terminology which is probably, as Martineau has remarked, significant. In the *Cogitata Metaphysica* Spinoza had spoken, in accordance with ordinary usage, of the proofs of our immortality, and throughout the "Short Treatise" we find him using similar language (de Ziele, Onsterfelijkheid). In the *Ethics* both words have finally disappeared, and we now hear only of the mind and the mind's eternity. It is just possible that the use of *mens* rather than the more familiar *anima* may have no special importance. Spinoza prefers, even in the *Cogitata*, to talk of the mind rather than the soul¹, and though the Dutch version in which the "Short Treatise" has come down to us reverses this usage, the change may, of course, be due to the translator. But there can be little doubt that the substitution of "eternity" for "immortality" indicates a conscious endeavour to avoid misleading associations. For the eternity of the human mind as set forth in Spinoza's *Ethics* is, as we shall see, something very different from what is ordinarily understood by the phrase "immortality of the soul." Our first step towards forming a positive conception of what it is will naturally be to define our terms. We must ask, first, what sense we are to put on the words "eternity," "eternal," and next, what we are to understand by the human mind.

A. *Eternal, eternity.* Spinoza is careful to warn us that we must not fall into the vulgar error of confusing eternity with indefinite duration. Duration is indeed the direct antithesis to eternity. The account of the latter, as given in the eighth definition of the first part of the *Ethics*, reads as follows. "By eternity I understand existence itself in so far as it is thought of as necessarily following from the mere definition of the eternal thing" (*quatenus ex sola rei aeternae definitione necessario sequi concipitur*); and we are further told in a footnote to this definition that "such existence, as for instance that of the essence of a thing, is thought of as an eternal truth, and consequently cannot be explained in terms of time or duration, even if that duration be conceived of as unbounded in both directions." Eternity is thus for Spinoza identical with scientific necessity, and to think of a thing as "eternal" is to perceive it, not as an inexplicable and isolated event or phenomenon, but in its various intelligible relations to the rest of the Universe as an integral and indispensable factor in the whole. It is in this sense that God (i. 19) and each of the "attributes" of God are said to be eternal. For God—or the

¹ But for the use of "*anima*" cf. *Cog. Met.* II. 12 *animam immortalem esse ex legibus naturae clare sequitur*.

Universe, is the *causa sui*, the self-existent whole whose supreme reality is the ground and source of all subordinate and derived existence. Again, each of the attributes of God taken singly is eternal. This follows easily enough from the definition of an attribute (I. def. 4) as that which for the perception of the intellect constitutes the essence of a substance. Extension and thought—to take the two attributes which alone are known to us—are eternal, not because, so far as we can tell, both have existed and will exist through an indefinite period of time, but because they are, so to speak, ultimate and irreducible terms in our apprehension of the Universe; (cf. the already quoted definition of “*attributum*,”) factors in Reality into which everything else can be resolved, but which cannot themselves be explained in terms of any kind of being still more simple and more universal. (In Spinozistic phrase each of them is infinite *in suo genere*.) Their “eternity” is only another name for the double fact that everything else can be resolved into some combination of modifications of them, while they themselves cannot be resolved into anything else, in short, for the necessity we are under of falling back upon them and their characteristic properties as our sole basis of explanation when we would explain anything whatever. We further learn (I. 21, 22) that not only the divine attributes themselves, that is, the ultimate irreducible terms, be they what they may, to which the understanding can trace the contents of the world (*facies totius universi*), and of which we only know the two already specified, thought and extension, but also any modification of an attribute, the existence of which can be either directly (I. 21) or mediately (I. 22) demonstrated from the general character (*absoluta natura*) of that attribute, may be called eternal. In a word, eternity is for Spinoza, as I have already said, practically equivalent to rational necessity, and to exhibit scientifically the systematic relations in which any aspect of reality stands to other aspects and to the whole system is to establish its eternity. All this becomes if possible even clearer when read in connection with the epistemology of the second part of the *Ethics*, particularly with the famous Spinozistic conception of the knowledge of things “*sub specie aeternitatis*.” The way in which this conception is originally introduced is especially instructive. By proposition II. 44 we are taught that it is characteristic of reason (*de natura rationis*) to look on everything as necessary, not as contingent, and the second corollary to the proposition runs “*de natura rationis est res sub quadam aeternitatis specie percipere*.” The proof of this is derived from the preceding proposition by the simple expedient of substituting “eternity” for “necessity” as an equivalent term.

How natural and easy such a substitution is one expression which occurs in the course of this demonstration will shew. In speaking of certain universal properties of things which, as he holds, cannot be thought of other than adequately, Spinoza says that they are conceived "*absque ulla temporis relatione*," and consequently "*sub quadam aeternitatis specie*." The contrast is evidently between such loose personal recollections as make up the content of the average uninstructed man's thinking and the systematic and orderly knowledge of the man of science. For the former each object or phenomenon in nature derives its interest and its place in the body of thought mainly from accidental associations with particular moments of his own experience; in the codified thought of the latter time, as a factor in the universal judgment, has disappeared. Thus a thunderstorm, to take a simple example, reminds the average man of "that terrific storm of three years ago when Mr A's house was struck;" to the scientific mind on the other hand it suggests a series of propositions about the nature and behaviour of electricity with which the temporal relations of before and after, as such, have nothing to do. A typical and familiar case of this knowledge "under the form of eternity" may perhaps be said to be that of pure mathematics as a body of truths whose universal and abiding validity is entirely independent of any considerations of time. And thus Spinoza's appropriation of the term "eternity" to denote rational necessity furnishes at once an interesting parallel with the language of the *Posterior Analytics* and a brilliant anticipation of one of the most characteristic doctrines of modern scientific logic. (Cf. e.g. Bosanquet, *Logic*, I. 273. "The order of succession... disappears in the significance of a positive systematic connection." "Time...is not a form which profoundly exhibits the unity of things.")

To this account of eternity I will only append two remarks, to the first of which I would invite special attention, as a due apprehension of it is absolutely essential to the correct understanding of Spinoza's view.

(1) We cannot too carefully lay it down that, though for Spinoza duration is no part of the definition of eternity and cannot of itself constitute it, yet eternity does and must entail as a consequence some kind of endless duration. The proof that this is so for Spinoza is afforded by numerous passages scattered up and down his writings, of which I will here quote only sufficient to establish the general principle, leaving for future consideration those sentences in *Ethics*, Part v. which directly assert its application to the human mind. To begin with then, we read at the end of the "Short Treatise" in set

terms of the proof of the "eternal and permanent duration of our understanding" ("gelijk wy hier ook mede, en dat op een andere wijze als te vooren, hebben bewezen de eeuwige en bestandige duuring van ons verstand." *Korte Verhandeling*, II. 26 *ad fin.*) Again in a proposition (I. 21) of the *Ethics* of which we have already made some use we are told of the modifications which can be deduced *ex absoluta natura alicuius attributi Dei* not only that they are "eternal" but also that they have *always* of necessity existed (*semper* *existere debuerunt*), with which we may compare the statement in *Cogitata Metaphysica*, I. 4, that duration *a tota alicuius rei existentia non nisi ratione distinguitur*. That some eminent critics of Spinoza (e.g. Martineau) have overlooked this important point is probably due to their transferring to *duration* the language which Spinoza uses of *time*. But we cannot too strongly insist on the persistence with which he distinguishes the two conceptions. It is not *duration*, as such, but *time* of which he says in *Cogitata Met.* I. 4 that it is a *merus modus cogitandi*; it is relation not to *duration*, but to *time*, which is in the *Ethics* the distinguishing characteristic of imperfect thought¹. So in the important letter which appears as no. 36 in the Land and Van Vloten edition of Spinoza, duration is recognised as a quality of extended things the defect or brevity of which constitutes a form of imperfection, "*extensio solummodo respectu durationis, situs, quantitatis, imperfecta dici potest; nimirum quia non durat longius, quia suum non retinet situm, vel quia maior non evadit*." And in the no less important letter to Ludwig Meyer (Land and Van Vloten, 12) we find a distinction clearly drawn between duration itself and the conception of it considered in abstraction *a modo quo a rebus aeternis fluit*. Thus abstractly considered *duration* becomes *time*, just as quantity considered in abstraction from substance becomes abstract *number*; and it is not quantity or duration themselves which are for Spinoza unrealities, but the false or abstract conceptions of the one as *mere* number and the other as *mere* lapse of time. Duration itself, like quantity, is a "*substantiae modus*," that is, a real quality or property of things: what is arbitrary and unreal (*ens rationis seu imaginationis*) is apparently the conception of real duration as made up of moments (*ubi quis durationem abstracte conceperit eamque cum tempore confundendo in partes dividere inceperit* etc.) and, I suppose also, the arbitrary selection of one of these moments as a *present* or starting-point from which to reckon in opposed directions. So that Spinoza's view of duration seems to answer to his well-known view of extension, according to which it is

¹ For the indication of the two following passages I am indebted to Mr F. H. Dale of Merton College; I gladly acknowledge the debt.

not the extended, but the abstract conception of extension as composed of *discrete parts* which is unreal (see *Ethics*, I. 15, Scholium). And the connection of eternity with duration can be further upheld by general metaphysical considerations. For it is abundantly clear that, while mere persistence cannot prove necessity, that which does not succeed in persisting somehow has not established its claim to be regarded as necessary. And if it be said that in the end everything is necessary, no matter how transient its existence, it is equally true that in the end, under strange disguises and marvellous transformations, everything persists.

(2) The second remark we have to make is that in the last resort nothing is absolutely eternal in its own right except God or the Universe itself. For by I. 24—a proposition of which I need not supply the proof—"the essence of the things created by God (*a Deo productarum*) does not necessitate their existence" (*non involvit existentiam*). Their essence—as following from and illustrating certain general laws—is a necessary truth (I. def. 8), their existence is not.

B. The Human Mind. The Human Mind (*Ethics*, II. Axiom 1) falls under this head of *res a Deo productae*, and any given individual may consequently have a beginning or end of existence. (*Ex naturae ordine tam fieri potest ut hic et ille homo existat quam ut non existat.*) There is, indeed, a sense (II. 8) in which the Idea, or modification of the attribute of thought, which constitutes the individual's mind, may be said to be existent in God before the individual as such has begun to be, but only in the same way in which the corresponding mode of extension, which we know as the individual's body, may be said to be already contained in the *attribute* of extension, or—to simplify Spinoza's geometrical illustration a little—as each of an indefinite number of diameters may be said to be contained in a given circle before any one of them has been actually drawn (II. 8, Schol.). The actual existence of the individual mind *as such* (II. 11) depends on and begins with that of the corresponding body. For it is part of Spinoza's characteristic doctrine of parallelism that along with the formation of any new modification of extension, or of any other attribute of God, there must always go a corresponding modification of the attribute of thought, or—as he otherwise calls it—an Idea in God of the former modification. Every extended thing is consequently said (II. 13, Schol.) to be, in its own degree, animate, and the prerogative of the Human Mind over the 'minds' of other things consists only in (1) the superior organisation of the body which it inhabits, and (2) consequently, as we shall see, in its greater capability of *adequate* thinking. We

may say, then, (1) (Prop. 11) that the actual existence of an individual human mind, as such, depends primarily on, and consists in, the presence in God of an idea corresponding to some individual thing,—that is, some particular modification of one of His other attributes, and (2) (Prop. 13) that the particular thing in question is that particular mode of extension which constitutes the human body. From this it will further follow, (1) that the more readily a body responds to and reacts on stimuli of every kind, the more easily will the corresponding mind receive and retain perceptions of every kind (Prop. 14), and also (2) that (II. 17 and II. 26) the original perceptions of the human mind indicate rather the effects produced on its body by other things than the veritable nature of those things themselves as they are “in reality” or “in God.” Thus, to take Spinoza’s own example, Paul’s idea of Peter throws more light on the workings of Paul’s psychical and physical organism than on the real character of Peter. Or, if one may be allowed to stoop to an illustration which is perhaps a little ridiculous, the views of a ‘Primrose Dame’ on the character of Mr Gladstone are more important for our estimate of the lady than of the statesman. It also follows (3) that things will group themselves, for the intellect “unpurified by science,” not so much according to the systematic causal and other relations which they bear to one another in virtue of their quality, and the places they fill in the general scheme of the world, as according to the external, and—if I may use a slightly inaccurate but highly convenient expression—accidental conjunctions in which they have been presented to the individual in the course of his personal experience. Thus the content of his mind will be, in the main, a body of fortuitous associations and personal reminiscences in which the real character of the things involved only here and there succeeds in shimmering through the clouds of blind prejudice and hazy recollection. This loose conglomeration of disconnected or mistakenly connected observations—grouped for the most part according to the order in time of the individual’s experiences—Spinoza regards as the lowest and most imperfect grade in human thinking. He commonly calls it “imagination,” and hardly ever mentions it without a reference to “*memoria*”—personal reminiscences—as its basis. At the opposite pole stands that true and intuitive perception of the scientific relations of phenomena and their position in the general order of things which is variously called by Spinoza “the third kind of knowledge,” “the knowledge of things under the form of eternity,” “the complete agreement of the Idea with its ideatum,” “the knowledge of things as they are in themselves,” or “in God.” Into the details of Spinoza’s well-

known and important theory of the three (or, following the "Tractatus de Intellectus Emendatione," the *four*) degrees of knowledge space and the scope of this paper will not allow me to enter. I will therefore only add one or two remarks on the special characteristics of the highest form of knowledge which may throw some light on the passage from the "Short Treatise" with which the present essay opened, as well as on the propositions from the Fifth Part of the *Ethics* which we shall directly have to examine. We may then just note in passing (1) that the possession of a true or adequate idea—that is, of knowledge of the second or third kind—is always accompanied by the consciousness of its adequacy: *qui veram habet ideam simul scit se veram habere ideam* (II. 42), a point to which we shall have to come back. (2) The highest and most adequate form of knowledge—i.e. knowledge of the third kind—is *concrete* and *intuitive*. It consists not in the mere apprehension of abstract general principles,—knowledge of the second kind; that, though also in its way both "true" and "adequate," stands altogether on a lower footing. Thus—to take an example—the ideal of knowledge is only very imperfectly realised in the apprehension of the abstract truth of the Uniformity of Nature, or, let us say, the Omnipresence of Evolution. Our knowledge only becomes fully "adequate" or "eternal" when we perceive *how* each particular department of reality sustains its place in the general scheme, or falls into line with the whole. So again it is not knowledge of the Human Mind "under the form of eternity" to realise merely that it somehow, like everything else, is dependent on and related to God; we must be able to see, as the concluding propositions of the *Ethics* will endeavour to make us see, just *what* the relation is, and in consequence, just what is the real place and significance of our mind in the Universe.

(3) The contrast between the mind possessed of "adequate" ideas and the mind which remains in the half-lights of imagination will give us by anticipation some insight into the meaning of that "Union with God" which we met in the extract from the "Short Treatise" and shall meet again in the Fifth Part of the *Ethics*. One might at first be inclined to suspect inconsistency in a philosophy which begins by deriving the human mind, as well as everything else, as a necessary consequence from the nature of the divine attributes, and then goes on to speak of a "Union with God," peculiar to the mind, which one man may attain more completely than another. The difficulty vanishes, however, when we reflect on the nature of an adequate Idea and on the self-consciousness which, as we have seen, always accompanies it. It is true that everything

and everybody is, in some way, a part of God; but the majority of things and of men are quite unconscious of their high dignity. Spinoza would hardly have gone more than half-way with Shelley (*Epipsychidion*, 128) in his famous saying about "the spirit of the worm beneath the sod." The thinker of adequate Ideas under the form of eternity, on the other hand, sees things "as they are in God"; he rethinks Ideas which may be said to form an integral part and parcel of the eternal "*intellectus infinitus Dei*," and in doing so is fully alive to the fact that he is doing so. Thus, while the ordinary man may be said to be the unconscious and poverty-stricken heir to an unoccupied estate, the man of true and adequate thoughts is in the position of the heir who has come into actual possession and fruition of his own. There are, no doubt, difficulties which may be raised about the consistency of this account with some of Spinoza's other statements about the *intellectus Dei*, and one of these difficulties we shall have directly to face, but on the whole the above exposition seems fairly to represent the meaning of his language about Union with God.

On the ethical effects of adequate thinking as the source of freedom from the domination of the passions and consequent happiness there is no need for me to dwell here. Important as those results are, they are, as such, confined to this life and concern the soul only in so far as it is considered in connection with the body. For my purpose—which is to examine the theory of the "duration of the Mind out of relation to the body"—the main results of *Ethics*, Parts III. and IV., may be taken pretty much for granted. I will therefore pass without further delay to the group of propositions in Part V. where the mind's eternity is affirmed and established in detail. These propositions (v. 21–v. 41) form a section by themselves in Spinoza's work, and present, perhaps, more difficulty than any other part of the treatise. Space alone—to say nothing of other limitations—will prevent my doing more now than indicating in a rather general way what I take to be the purport of them. In doing this there are two opposing views, against both of which I have something to urge. The first of these views is that which sees in these propositions something like a promise of what is ordinarily understood by conscious personal immortality. Though this view has in the past been held by competent authorities, it has, I think, been finally disposed of by the investigations of Martineau and Pollock. If any direct refutation is needed from me, it should be enough to refer to the whole tenor of Spinoza's thought in general, and, in particular, to Prop. v. 21, by which "imagination" and memory are shewn to be possible only so long as the body

continues in existence. This is, indeed, no more than we could have inferred for ourselves from the contrast already established between imagination and memory, which contemplate things and events "*cum relatione ad tempus*," and adequate scientific thought, for which things appear as they are, "*sine ulla temporis relatione*." But without imagination and without the least vestige of personal recollection, how much individuality is left? And when we further add Prop. v. 34, by which it is shewn that all emotions other than the eternal 'intellectual love of God' also cease with the body, it becomes abundantly clear that, whatever survives of us after death, all that now makes *personal* character or idiosyncrasy and distinguishes one man from another has vanished. Hence it is not surprising that able critics have gone to the other extreme and constructed a theory of Spinoza's meaning on the assumption that his "eternity of the mind" has nothing at all to do with any kind of continued existence after death. From their point of view, the strongest emphasis must be attached to the passages which dwell on the difference—which they commonly exaggerate, as I have already pointed out, between eternity and duration, and the difference between the man of adequate and the man of imperfect ideas will consist entirely in the qualitative superiority of the one over the other,—*while his life lasts*. I propose, however, to shew that this view also, though nearer the truth than the former, yet overshoots the mark. While it is most indubitably true that the essential and fundamental characteristic of the "eternal" life, with Spinoza, is its *quality*, yet there is abundant evidence that its attainment somehow entails consequences as to the duration of the mind after death. For, not to recur to the general connection which I believe I have established between eternity and duration, we may note (1) that more than one reference is made to the effect of adequate thinking as freeing us from the fear of death (cf. IV. 67) *Homo vere liber nulla de re minus quam de morte cogitat*. v. 38, *quo plures res secundo et tertio cognitionis genere Mens intelligit...eo mortem minus timet*. (2) Further, the language with which Spinoza introduces the section on the Mind's eternity, *tempus est...ut ad illa transeam quae ad Mentis durationem sine relatione ad Corpus pertinent*, and his repeated use of the word "*remanere*" in this connection either mean continued duration of some sort, or they mean nothing. What this language actually means and what it does not we may now learn from a brief survey of the chief propositions on the subject in the order of their occurrence. To begin with then, Prop. 21, by which memory and imagination are excluded from continuance after the death of the body, by itself, as we have

already seen, proves that Spinoza cannot be thinking of anything that can properly be called "personal" immortality. Prop. 22 takes us a little way, though only a little way, towards a positive conception of his meaning. "Still," he says, "there is necessarily in God an idea which expresses the essence of this and that man's body under the form of eternity." The proof of this is as follows. The essence of the individual's body is a necessary consequence of the nature of God; the body must therefore of necessity be conceived of, if it is to be adequately conceived of, "*per ipsam Dei essentiam*." There will therefore, in accordance with the doctrine of the parallelism between the divine attributes, necessarily exist in God, in so far as He is conceived of under the attribute of thought, an Idea which expresses the essence of the individual's body—as indeed there will be a similar Idea of everything else which follows from His nature. (See *Ethics*, II. 8.) That is, in other words, everything, when conceived of as a necessary element in the Universe as a whole, is, in that relation, eternal, and the human mind is no exception. (Compare Green, *Works*, Vol. III. p. 159, Fragment on Immortality.) In Prop. 23 with its important scholium we come to the special application of this important doctrine to the case of the mind. "The human mind cannot be entirely destroyed with the body, but something of it remains which is eternal." For the Idea which is eternally present in God of the essence of the human body is just what, on Spinozistic principles, constitutes the special and peculiar *essence* of the human mind. Thus, even after death, there still remains something "in God" which belongs to the inmost essence of the individual human mind; and, as no finite duration (*duratio quae tempore definiri potest*) can be attributed to the Mind except in so far as it is actually conjoined with the body and consequently subject to the category of *time*, this "something" must be thought of, not under the form of time or duration, but, since it represents a necessary ingredient in the nature of God, as something *eternal*. So that, in some sense or other, there is about every man something deathless and eternal. But this demonstration still leaves the two most important questions which this subject gives rise to without an answer. We still want to know (1) how far we can attribute to the Mind an eternity which cannot with equal reason be asserted of the body, or of any other thing; (2) exactly what the *aliquid aeternum* which survives after our death must be taken to be.

(1) The answer to the first question is already indicated by the most important note which is appended as a scholium to our proposition. Briefly stated, it is this. The special and

peculiar prerogative of the human mind over all other things is that it alone can *know and enjoy* its own deathlessness. Other things, no doubt (I. 21, I. 22, compared with I. 15), as following of necessity from the attributes of God, or—if we prefer to express ourselves otherwise—as necessary “stages” in the world-process, are equally eternal, but their eternity is unknown to and unenjoyed by themselves. We, on the other hand, as the scholium says, “*sentimus experimurque nos aeternos esse.*” And by our consciousness of our own eternity Spinoza does not mean those vague and only half-rational yearnings and impulses towards the “Infinite”—or rather, the “Indefinite”—to which some attach such importance. A sound philosophy, indeed, cannot be expected to set much store by sensations so ill-defined and misty. What is meant here is something much more intelligible as well as more simple. Our consciousness of our own eternity, in fact, means our capacity for contemplating things in their systematic connections with one another, apart from merely temporal relations, and particularly our ability in our science to work into the fabric of our knowledge things vanished and gone before our birth and things yet to come equally easily with the events of yesterday. “The mind,” says Spinoza, “perceives the things which it conceives by the understanding no less vividly than those which it remembers. For the eyes of the mind, by which it sees and observes, are nothing else but demonstrations themselves. And therefore, though we have no recollection of existing before the birth of our bodies, still we feel (*sentimus*) that our mind, in so far as it involves the essence of the body under the form of eternity, is eternal, and that this its existence cannot be defined temporally nor explained in terms of duration.” It is thus no ill-defined sentiment but the capacity of becoming what Plato magnificently calls (*Rep.* p. 486) the “spectator of all time and all existence” that constitutes the earnest and certitude of our eternity and gives it its characteristic superiority over such eternity as may be reasonably asserted of a part of inorganic nature, a brute, or even of our own body.

(2) The other question “what exactly is the *aliquid* which survives,” is perhaps not answered by Spinoza in so many words, but a review of the remaining propositions of this section of the *Ethics* will, I think, enable us to advance a solution with some confidence. First, then, we have to gain a clearer conception of eternity and the “eternal part” of the mind as they manifest themselves in this present life, and next, on this basis, bearing in mind what has already been established as to the perishability of certain elements of our psychical nature, we ought to

be able to form a pretty shrewd conjecture as to what is left. Now we find in the series of propositions 24-39 the old doctrine of the "Short Treatise" restated and developed. In the "Short Treatise," it will be remembered, the qualitative characteristics of the Immortal part were two, (a) its possession of true and adequate ideas, (b) its union, by means of love, with God. The propositions before us aim at establishing the same two points with a further difference in each case. We learn now that the basis of that contemplation of things as they are "in God" in which "standeth our eternal life" is a knowledge of our own body "*sub specie aeternitatis*," and that the love of God, which is the only emotion which belongs to the mind *qua* eternal, is an "intellectual" love which is no other than the infinite love with which God eternally loves Himself. A short account of the steps in the argument will make both these conceptions more intelligible. Props. 24, "The better we understand particular things, the better we comprehend God," and 25, "The highest aim and chief virtue of mind is to understand things with the third kind of knowledge"—*i.e.* to trace them as necessary consequences of the nature of one of the divine attributes—are merely introductory to what is to come, and as the proof of them must be obvious to anyone who has followed the argument of this essay up to the present point, they need not delay us. Prop. 26, "The more capable the mind is of understanding things with the third kind of knowledge, the more desirous is it of so understanding them," may also be allowed to pass without comment. Prop. 27 is more important. "From this third kind of knowledge arises the highest possible content of mind" (*mentis acquiescentia*). This follows naturally from what has been already laid down, that to attain this kind of insight into the ways of the world is the supreme endeavour (*summus conatus*, Prop. 26) of the mind; naturally, the gratification of the *summus conatus* produces the *summa quae potest dari mentis acquiescentia*, especially as each adequate Idea is, as we know (II. 43), accompanied by the knowledge of its own adequacy, that is, of the thinker's own perfection (*concomitante idea sui suaeque virtutis*). The use of this proposition will be, as we shall find, to establish the connection, which for Spinoza is essential, between full and perfect knowledge and the corresponding emotional state, the "*Amor intellectualis Dei*." In Prop. 29 we are at last face to face with the great paradox of the system. "Whatever the mind knows under the form of eternity it knows, not by conceiving the present and actual existence of its own body, but *by conceiving the essence of its body under the form of eternity*." The meaning of this amazing sentence will best appear if, discarding Spinoza's formal demonstration, we

go back to certain ideas which we have found underlying the Epistemology of the second part of the *Ethics*. We learned there, it will be remembered, that the immediate object of every idea is some affection or state of the corresponding body (II. 13, II. 19) and that, consequently, in our ordinary perceptions we might be said to be perceiving rather the changes in our own body produced by various objects than the real character of the objects as they are in themselves, or "in God" (II. 16, Coroll. 2). We may now see that the scientific apprehension of things "*ut in se sunt*" equally involves a reference to the body, but of a different kind. In all our statements about the physical world, for instance, there is a tacit but never absent reference to our own organism as a sort of permanent *Schauplatz* or background.

When we speak *e.g.* of the state of things on this earth at some remote period before the appearance of man, or in some obscure nook or cranny of the world where human foot has never trod, what we give as the fact is always what *we* should have seen, had we been there to see it. So with our descriptions of the behaviour of a microscopic animalcule; we narrate what we have seen under the microscope, or what we believe we should see, were our lenses of sufficient power. Apart from this ever-present reference to the standard of the normal human organism every quality in terms of which we can talk about the world as it exists for science becomes unmeaning. For, even if you succeeded in eliminating all so-called "secondary" qualities from your account of the "real" world, you would not have got rid of space and motion, and I suppose no one who understands what he is talking about means by space and motion anything other than the space and the motion which we *see*. Note, however, the difference between this reference of everything to our own body and the former. The uninstructed man's reference is to the *present* condition, or the past condition at some arbitrarily-chosen moment, of his own individual organism; the scientist's reference is to the standard of the normal human organism conceived of as being, without distinction of past, present and future, a permanent constituent of and abiding background for reality. Thus, while the basis of the ordinary man's knowledge, such as it is, of facts, is the knowledge of his own body "*cum relatione ad certum tempus et locum*," the knowledge of the body as involved in the scientist's *Welt-Anschauung* is knowledge "without reference to time," or "*sub specie aeternitatis*." So the distinction between the knowledge which the mind gets of things when that knowledge is based on the affirmation of the actual present existence of the body and the knowledge which is dependent on the affirmation of the "essence of the body under the form of eternity" is that the one takes its stand at a

particular point of time and space, and so sees all upon which it looks in a perspective which more or less obscures the true outlines of objects; the other is, so to say, raised sufficiently high above the plane in which its objects are contained to take in their relations to one another truly and without distortion, as the eye takes in the view from a balloon. In the one case you have a distorted congeries of personal recollections and experiences, in the other an orderly and digested system of science.

It must also, of course, be remembered that, for Spinoza, to have an idea of a thing involves having an idea of that idea (II. 22), and consequently that adequate knowledge of the body "*sub specie aeternitatis*" includes not only a scientific apprehension of the outer world but also a profound knowledge of your own mind, the self-knowledge which brings sanity of moral purpose and inward quiet. The man who adequately knows his own body knows not merely the true relations of other things to each other, but the place of himself in the world, what his value in the scheme of things, what his power of action and grounds of hope. He knows "what things must, and what things may be;" he has the secret which enables a man, in the great phrase of Lucretius, "to contemplate the All with a mind at peace," and he is consequently strong, as only he can be strong, in the self-mastery and singleness of purpose which such knowledge gives. Prop. 30 takes us yet a step further towards our goal. "In knowing itself and the body under the form of eternity the mind necessarily has knowledge of God, and knows that it is in God and is conceived through God (*scit se in Deo esse, et per Deum concipi*). This follows, of course, from the equivalency, with which we are already familiar, of eternity with the necessity of the divine nature, and of knowledge 'under the form of eternity' with knowledge of things "*ut in Deo sunt*." The object of restating the proposition in this form is to lead up to the demonstration of the connection between true thinking and the intellectual love of God. This demonstration is given in form in Prop. 32. As has already been shewn, the adequate knowledge of things under the form of eternity yields the highest possible peace and content of mind (Prop. 27), which moreover (Prop. 30) is accompanied by the recognition of God as its cause. Hence, adequate knowledge "*sub specie aeternitatis*" necessarily awakens love to God, not in so far as we imagine Him to be present at a given moment, but in so far as we recognize Him to be eternal. Thus this kind of love differs *toto caelo* from gratitude to God for private and personal favours vouchsafed; it arises, altogether apart from any personal reference, from the simple contemplation of the divine nature as it is "eternally," or for science, and it is therefore called by Spinoza, to distinguish it from all

emotions based on the "passions" which accompany "imagination" and its imperfect ideas—that is, based on *personal* grounds—intellectual. And this intellectual love of God is (Prop. 33) itself eternal. For, by Prop. 31, the mind in knowing anything under the form of eternity is knowing its *own* eternity. Hence it is only in so far as the mind is itself eternal that it can be the source of knowledge under the form of eternity and of the emotions consequent on it. True knowledge and the intellectual love aroused by it belong therefore to the mind *qua* eternal, and only *qua* eternal. They are thus themselves eternal. Further, knowledge *sub specie aeternitatis* and the intellectual love of God are the *only* activities of the mind which are truly eternal. For the former this results from what we have already learned of the perishability of all knowledge based merely on imagination and memory, that is, of all knowledge which is not *sub specie aeternitatis*; for the latter it is proved by Prop. 34, of which we have already made some use; "the mind is subject to the emotions which are grounded on the passions only so long as the body endures." As any and every emotion which arises from imagination,—that is, from any grade of knowledge short of true and adequate knowledge, is by Spinoza said to belong to the mind *quatenus patitur, non quatenus agit*, this at once excludes all and each of the emotions other than the intellectual love of God of which we have just heard. So that the "eternal" part of mind now stands reduced to two elements only, one cognitive and one emotional, the cognitive element being concrete but impersonal scientific truth, and the emotional the calm and acquiescence which such truth produces.

We have now practically completed our task. We have defined the eternal part of mind, and thus arrived at the answer to the question which confronted us a few moments ago, "What is the 'something' that remains when the body is dissolved by death?" The remaining propositions of the closing section of the *Ethics* contain much that is of high interest and would demand separate consideration in a complete account of Spinoza's philosophy. Particularly interesting is the suggestive identification of man's "intellectual" love to God with God's love to man, and of both with God's eternal intellectual love of Himself. All this, however, is nothing more than a fairly obvious deduction from the principles which have been established in the propositions that have already come under review, and contains nothing that could materially affect our decision as to Spinoza's meaning. Still less difficulty will be felt by a reader who has clearly grasped the principle of the parallelism of extension and thought in the statement that "*qui corpus ad plurima aptum habet, is mentem habet cuius maxima pars est*

aeterna." All that remains for me to do, then, is to attempt such a translation of our present results, so far as they bear on the state of the mind after death, into ordinary non-technical language as may give more definite and tangible sense to what must appear, to a reader who is not intimately acquainted with Spinoza's terminology, slightly vague and shadowy.

We have already abundantly seen what the mind's eternity is like as felt and enjoyed during life; we have now only to ask how we are to conceive of its continuance after death. That it does in some sense continue; *i.e.* that "eternity" does not mean *merely* the highest form of mental activity during the present life, I think I have already proved beyond all reasonable doubt, but I may now further strengthen my case by the citation of three passages which could not well have been adduced at an earlier stage in our enquiry. The first of the three is found in the Scholium on Prop. 34, where we are told that mankind in general, though conscious of their own eternity, confound it with duration and attribute it to memory or imagination, which they believe capable of surviving death. Here it will be observed that the error attributed to the mass of mankind is not that they wrongly think that what is "eternal" remains or persists after death; so far they are in accordance with Spinoza's own language on the subject; but that they (1) think this "survival" *the essence* of eternity, and (2) attribute it to the wrong element in mind. So in the Corollary to Prop. 40 it is laid down that the "part which remains," be it ever so small in respect of the whole mind, is still the "most perfect part," where, as anyone may see, the qualitative superiority of the "eternal" life and its persistence are as clearly distinguished as it is possible for two things to be. Lastly, in the Scholium to this same proposition we have the formal definition of the mind's eternity in these words: "the mind, in so far as it understands (*intelligit*), is an eternal mode of thought which is determined by another eternal mode of thought and this again by another, and so on *in infinitum*; so that all *together* (*simul*) form the eternal and infinite intellect of God," where the last clause seems absolutely to exclude the perishability, in any sense, of the "eternal" mode of thought referred to.

Some difficulty may perhaps arise from a comparison of this Scholium with certain other passages in the *Ethics*. It might be asked how the statement that the sum total of finite minds makes up the infinite intellect of God is consistent with the famous sayings in the Scholium to I. 17, where we are told that God's intellect differs from ours *toto caelo* and that the only point of identity between the two is, like the point of identity between a common dog and the dog-star, their being usually

called by the same name. And a further difficulty suggests itself about the whole conception when we go on to read the proof given in this same Scholium of the incommensurability of the divine with the human intellect. For the point on which the whole argument turns is the very natural one that an intellect which, like that of God, is the cause both of the essence and of the existence of its objects cannot but be very different from one which is not. Yet how are we to reconcile this explicit recognition of the divine intellect as the sole cause (*unica causa*) of the objects it comprehends with the equally explicit declaration of I. 31 that the "*intellectus actu*," whether finite or infinite, belongs not to *Natura naturans* but to *Natura naturata*? I cannot go into these questions here at any length, but I may perhaps be allowed just to indicate what I take to be the way out of the difficulty. To take the second point first. It is clear, I think, that the "intellect" of God of I. 17 is something more than the *intellectus actu* of I. 31, even when the latter is taken to be "infinite." For it is clear from the language of Spinoza's proof of the latter proposition that the *intellectus actu*, even when thought of as infinite, must be taken to mean an understanding which is still distinguished from other forms of psychical life (as *e.g.* will and feeling) to say nothing of the forms of extension or of some third attribute of God. Whereas in God not only the various "modes" of each attribute, but also the infinite attributes themselves, form a perfect unity without distinction of any sort (see II. 7, Corollary). Hence the *infinitus intellectus Dei* cannot be identified with any form of *intellectus actu*, that is intellect as distinguished from and opposed to extension or any other attribute, and the argument of Prop. I. 31 is therefore not applicable to it. And with respect to the other question, the difficulty vanishes, I think, on a second reading. For we must remember that we have no right to assume that *human* minds are the only finite minds in the world. God, we must remember, has an *infinite* number of attributes which are inaccessible to our human perception; and it must follow therefore, on the Spinozistic principle of parallelism, that each modification of each of these—to us—unknown attributes will be attended by its corresponding Idea in God conceived under the attribute of thought, that is, by its corresponding finite "mind." Hence there will be a great deal in the "infinite intellect of God" besides *human* thought. And it is these other hypothetical minds, I suppose, which he means by the "other eternal modes of thought" by which, according to the Scholium on v. 40, the eternal mode of thought which constitutes "our mind" is limited. This interpretation is rendered practically certain by two passages in

Spinoza's letters¹. Writing to Oldenburg (Land and Van VI. xxxii) he expressly says that the difference between the human mind and the *potentia infinita cogitandi* in nature is that the latter "*in se continet totam naturam obiective*," while the former is this same infinite intellect (*hanc eandem potentiam statuo*), but not *qua* infinite and comprehending the universe but *quatenus tantum humanum corpus percipit*. And in the important letter (L and Van VI. LXVI) to Tschirnhaus we learn that, though every single thing is expressed in the infinite intellect of God in an infinite number of ways corresponding to the infinite number of attributes, still these infinite "ideas" have no connection with one another, and therefore constitute the mind, not of one, but of an infinite number of beings (*unam eandemque rei singularis mentem constituere nequeunt, sed infinitas*).

How then to restate our results in more modern language? I think, thus. What is meant by the survival of the Mind as "intelligence" is simply the fact that an adequate idea, when once thought, forms a permanent addition to the stock of scientific knowledge in the world. In a way, of course, all emotions and thoughts are eternal, as being the product of one and the same eternal "World-process," but it is only the perfectly adequate scientific formulation of truth which can persist unchanged. Thus, those personal memories and affections which derive all their piquancy and poignancy from the personal reference, perish for ever, as such, at death. Parental or sexual love, *e.g.*, may be a permanent factor in human life, but not the love of this particular parent for this particular child. That derives all its depth from the fact that it is not merely parental love as such, but the love of a particular individual *A* for his own child *B*. Hence, with the death of the persons involved, it too dies. And so with all thought and feeling whose inmost being is bound up with the personality of the subject who experiences them. They depend for their very existence on just those differences which make the existence of one man separate from that of another, and it is for Spinoza not in so far as men are thus exclusive of one another, but only as they can enter into and share a life without personal reference where all meet and are indistinguishably one that they are immortal. So again with honest but defective scientific thinking. The astronomical ideas of Ptolemy or Tycho-Brahe, so far as they contained truth, survive indeed in later science, but only after suffering strange transformations. As formulated and held by those scientists, they have perished

¹ Here, again, I have to express my indebtedness to Mr Dale.

beyond the power of time to recall. And this utter mortality is to some degree the doom of every man, no matter how great his stock of adequate ideas. For by IV. 4, *no man can make himself a mere home of adequate thought. Fieri non potest ut homo non sit naturae pars.* And the Corollary is *hominem necessario passionibus semper esse obnoxium*; and to be subject to "passions" is, as we have seen by V. 34, to be perishable at death. But an adequate idea, once thought, takes its place, in the form in which it is thought, as a permanent addition to knowledge. Whoever would think again the adequate geometrical ideas of Euclid or Newton must think them not only in the spirit but in the very shape in which Newton or Euclid thought them. For an adequate idea has a double prerogative over every other factor in the soul's life. In formulating it, he who first does so is rethinking part of the eternal content of the divine intellect in its true form; thus the adequate idea, properly speaking, has had no beginning and will have no end. He is also thinking something which all subsequent human science must rethink after him; hence the adequate idea, because adequate and eternal, is also, so far as it appears in time at all, as a consequence of its eternity, permanent and ever-during. For even human thought is not for Spinoza, as it might be for some philosophers, a merely transient phase of the supreme reality which may sooner or later give place to some newer development, but an abiding and perpetually necessary consequence of the divine nature, an *aeternus modus* of one of the attributes, which consequently *semper existere debet*.

Such a theory of intellectual, or impersonal, immortality is not without its repellent aspects and difficult points. It may be attacked, as by Martineau, on the ground of its failure to satisfy ordinary human yearnings and aspirations. Or it may be assailed more philosophically from the opposite side by one who likes to raise the question whether we have a right to assume, as Spinoza does, that any truth is so true that it can be regarded as a permanent and immutable contribution to knowledge. It may be said that even the most indisputable axiom must be prepared to undergo modification as science grows, or that, if there be "adequate ideas" at all, they will at best be found among the most abstract and empty generalisations of logic, and so fall far short of the concrete fulness which is with him the characteristic peculiarity of knowledge of the third or highest kind.

With Spinoza, however, as with most writers who are really worth a serious study, the task of intelligent interpretation, though harder, is infinitely more valuable than that of facile criticism, even when the critic hits the real blot. Almost more

than any other modern philosopher, the retiring and unobtrusive man has succeeded in awakening the most opposite feelings and the most ludicrously exaggerated judgments. But it is really a question of only secondary importance whether the great Jew of Amsterdam is for us as for Novalis, a "Gott-betrunkener Mensch," and for Renan the man who "has perhaps had the nearest vision of God," or whether we regard him, to use the more than half ironical expressions of the most illustrious of English philosophers, as a "famous atheist," and his system as the "gloomy and obscure region of hideous hypothesis." The main thing, here as everywhere, is not to judge—that is easy enough—but to make sure that we understand.

II.—PLATO'S EARLIER THEORY OF IDEAS.

BY R. P. HARDIE.

I DO not intend in the following pages to discuss Plato's Earlier Theory of Ideas in a general and exhaustive way, but only from a special point of view. Plato's metaphysics seems to have been suggested to him primarily by his logical theories, and to be hardly more than a fresh way of stating logical results. Perhaps the best way then of approaching the Theory of Ideas is through Plato's logic, and this is the method which I propose to adopt. Even if this mode of treatment may cause a loss in breadth and completeness, we may at least hope for a gain in simplicity. Further I propose to confine my attention to one passage, chiefly, of Plato's dialogues, the metaphysical parts of Bks. VI. and VII. of the *Republic*. Two special considerations have led me to adopt this plan.

The first is the fact that it is now possible to assume with confidence that the *Republic* is one of the earlier dialogues, though perhaps the latest of these. The determination of the order of Plato's dialogues was originally due to Prof. Lewis Campbell, who, in his edition of the *Sophista* and *Politicus*, published in 1867, maintained that the *Republic* was separated from the *Laws* by a group of dialogues which included the *Sophista* and *Politicus*. This view he supported mainly on philological grounds. It has been corroborated by independent, and much more recent, investigation of a similar kind in Germany, without however winning the assent of Zeller. For the study of Plato the importance of Prof. Campbell's theory cannot be over-estimated. Even if the theory is not absolutely proved, the evidence for it is more than sufficient to justify me in assuming it as a hypothesis to be tested ultimately by the light it throws on the development of Plato's thought. Plainly the duty of a student of philosophy is to accept the decision of scholars on a matter of this kind. Our knowledge of Plato has been sufficiently retarded by the *a priori* dicta of the metaphysicians.

The second consideration that has led me to devote most of my space to certain passages of the *Republic* is that within the last year or so the attention of students has been directed to that dialogue by the publication of Jowett and Campbell's edition of the *Republic* and of Bosanquet's *Companion to Plato's Republic*. These are both, in the main, commentaries, and are invaluable for the minute study of the text. But it will not be necessary in a paper like the present, which aims at a very general outline of the Theory of Ideas as expressed in the *Republic*, to make many explicit references to them. I shall assume Prof. Campbell's conclusion that the *Republic* is practically a single whole.

I shall have occasion to refer frequently to Mr Jackson's well-known article in the *Journal of Philology*, x., "On Plato's *Republic*, vi. 509 D sqq." Even if one differs from Mr Jackson's conclusions, one must admit the great service he has rendered by his very interesting and novel theories. Many students of philosophy, I fancy, have derived their interest in Plato from the article mentioned and from the series of articles by Mr Jackson in the same journal on the Later Theory of Ideas.

Socrates's contribution to science may be said to have been the invention of a simple kind of argument or regular process of thinking by means of which he tried to make ordinary thought more clear and definite. This art of Socrates was purely practical, a mere *ἐμπειρία* or *τριβή*; no theory of it can be ascribed to him. An attempt to formulate the Socratic art is to be found in a well-known passage of Xenophon's *Memorabilia* (IV. vi. 13): *εἰ δέ τις αὐτῷ περὶ τοῦ ἀντιλέγοι μηδὲν ἔχον σαφὲς λέγειν, ἀλλ' ἄνευ ἀποδείξεως ἤτοι σοφώτερον φάσκων εἶναι, ὃν αὐτὸς λέγοι, ἢ πολιτικώτερον ἢ ἀνδρειώτερον ἢ ἄλλο τι τῶν τοιούτων, ἐπὶ τὴν ὑπόθεσιν ἐπανήγεν ἂν πάντα τὸν λόγον*. In other words, there is a principle or standard (*ὑπόθεσις*) and a reference (*ἐπαναγωγή*) to it of the question in dispute. In general the standard is the definition of a common name, e.g. a good citizen is a man who makes the *πόλις*, let us say, stronger than her enemies. What is referred to it is a proposition of the form: *x* is a good citizen. The argument as a whole, since the major premiss can be converted simply, is a syllogism in the mood Barbara. If the *ἀπόδειξις* or demonstration of the point in dispute is expressed in an interrogative form, we have an example of *ἐρωτητική*.

In his earlier period, that is, in the *Republic* and the dialogues that preceded it, Plato developed the Socratic art in two ways: (1) he formulated it and in so doing found an expression for it in terms of metaphysics (the Theory of Ideas): (2) he

brought it into connection with the science of mathematics. In what follows I propose to verify this statement by an examination of what is perhaps the most important passage in which the Earlier Theory of Ideas is explained, *Republic* 504 D—534 E. But before doing this I will examine *Phaedo* 95 E—105 D, a passage whose connection with the *Republic* has been pointed out and emphasized by Mr Jackson (*J. of P.*, x. pp. 136—138) and by Mr Archer-Hind in his edition of the *Phaedo*, Appendix II. The fact that this connection is not yet perhaps sufficiently recognized and that its interpretation is still disputed (*J. of P.*, XXIII. 45) will perhaps be held to justify further discussion of it.

For the sake of convenience, I will begin by giving an abstract of *Phaedo* 95 E—105 D. Socrates is made to explain how in his opinion Pre-Socratic science (physics and mathematics) had failed to assign adequate causes (*αἰτίαι*) for things, while it destroyed the simpler beliefs of ordinary knowledge. Anaxagoras however was different from the other Pre-Socratics. He held that *νοῦς* is *πάντων αἴτιος* and he might therefore be expected to find the only true cause of things in *τὸ βέλτιστον*. But as a matter of fact Anaxagoras, while using this language about *νοῦς*, fell back on unintelligible (physical) causes which should properly be regarded as secondary causes or conditions. In trying to carry out Anaxagoras's original design, Socrates had however himself failed. Perhaps it was like the case of being blinded by looking directly at the sun instead of investigating it in an *εἰκὼν* such as a reflection. Perhaps therefore by way of *δεύτερος πλοῦς* we ought to study *τῶν ὄντων ἢ ἀλήθεια* in *οἱ λόγοι*. This method will consist in 'supposing' (*ὑποθέμενος*) in each case the *λόγος* that seems strongest or 'most valid' (*ἐρρωμενέστατος*) and admitting as true whatever agrees with it. This is the kind of explanation or cause invented by Socrates, the familiar method of *εἶδη*; e.g. in the case of *τὰ καλά*, the *ὑπόθεσις* that there is something that is *καλὸν αὐτὸ καθ' αὐτό*. Things that are *x* are *x* by *παρουσία* of, *κοινωνία* with, '*x*' (the *εἶδος*). The question as to how it is so Socrates leaves open: only he insists on the primary fact that '*x*' is the sole *αἰτία* why *x*'s are *x*. In respect to each *ὑπόθεσις* there are two perfectly distinct questions: (1) as to the consistency of what springs from it (*τὰ ὀρμηθέντα* or *ὀρμημένα*), and (2) as to the truth or validity of the *ὑπόθεσις* itself. If the *ὑπόθεσις* itself is questioned, the objector must be referred upwards to a *ικανὸς λόγος*. Lastly if *y* is contrary (*ἐναντίον*) to *x*, any one of the many *x*'s may be *y*, i.e. may share in both *x* and *y*, but *x* is never *y*, is always repellent of it. And further if *z* is always *x*, i.e. if *z* is an *εἶδος* falling under *x*, then *z* as well as *x* will repel *y*.

There are two points on each of which this abstract commits us to a decision in favour of one out of two possible interpretations.

The first is with respect to the *πρῶτος πλοῦς*, which Plato had been forced to abandon. The interpretation adopted above is due to Mr Jackson (*J. of P.*, x. pp. 136—138) who is followed by Mr Archer-Hind (*Phaedo*, App. II.). All previous commentators (Stallbaum, Ast, Geddes etc.) had apparently identified the *πρῶτος πλοῦς* with the methods of the physicists and not with the teleological method (hinted at by Anaxagoras) of explaining everything by reference to *τὸ ἀγαθόν* or *τὸ βέλτιστον*. Mr Jackson's view is so convincing as to need no defence.

The second disputable point is the precise bearing of the simile of looking at an eclipse. Mr Jackson's view (adopted in the abstract given above) is that the unsuccessful attempt to investigate *τὸ ἀγαθόν* corresponds to looking directly at an eclipse, while the investigation of *τῶν ὄντων ἢ ἀλήθεια* in *λόγοι* corresponds to observing an eclipse by means of its *εἰκὼν* in water. Recently Mr C. E. Campbell (*J. of P.*, XXIII. 45, pp. 77—80) has suggested that the two ways of observing an eclipse correspond, not to the *πρῶτος* and the *δεύτερος πλοῦς*, but to two rival methods of prosecuting the latter. Plainly the first step towards deciding this question is to get a clear idea of what the *δεύτερος πλοῦς* actually was, from the parts of the text that are independent of the simile. This can be done most conveniently perhaps by an examination of Mr Archer-Hind's view as explained in his edition of the *Phaedo*, chiefly App. II.

In Mr Archer-Hind's view the *δεύτερος πλοῦς* is identified with the study of *λόγοι* as distinct from *εἶδη*. He says for instance (p. 190), "Socrates in fact, since he despairs of actually grasping the eternal ideas, of which all natural phenomena are symbols, endeavours to form from those symbols, mental concepts or universals, which shall represent the ideas to him : they are the ideas as reflected in his intelligence," and again (p. 139, note) "If we are asked, why is a rose beautiful?...we shall say it is because the rose partakes of the beautiful. Now it is of course the idea which is the cause of the rose's beauty; the *λόγος* is not the cause, but it is the conception of the cause which, for fault of direct apprehension of the idea, we have formed by generalisation from particulars. Only when we know the ideas shall we have a true insight into causation; until then *λόγοι* are the best substitute." But as far as I can see there is nothing in the text to suggest that Plato distinguishes *λόγοι* from *εἶδη*. The *δεύτερος πλοῦς* consists in making certain *ὑπο-*

θέσεις, 'assumptions' or 'suppositions.' What is assumed is indifferently described by Plato as a *λόγος* or an *εἶδος*, as the following words prove: *ὑποθέμενος ἐκάστοτε λόγον* (100 A), *ὑποθέμενος εἶναι τι καλὸν αὐτὸ καθ' αὐτό* (100 B). The most explicit account (in 100 B—101 D) of the *δεύτερος πλοῦς* is given, not in terms of *λόγοι* but of *εἶδη*, which constitute the kind of *αἰτία* with which the persons of a Platonic dialogue are familiar.

As we should expect, Mr Archer-Hind's view of the *πρώτος πλοῦς* depends on his view of the alternative method, and we find him identifying it with a knowledge of the *εἶδη* as well as with a knowledge of *τάγαθόν*. For the *εἶδη* being rejected from the alternative method *must* find a place in the *πρώτος πλοῦς*. The quotations given above make this plain. That the *πρώτος πλοῦς* is also identified with the investigation of *τάγαθόν* appears for instance from the following (p. 188): "his hope was to discover *τάγαθόν καὶ δέον* as the ultimate *αἰτία*; in other words, to construct a teleological theory of the universe. This then is the 'great and wondrous hope,' which the physicists could not gratify, and which he himself failed to fulfil; and this it is for which the method of *λόγοι* offers a substitute."

We may now return to the disputed question of the simile of the eclipse. Mr Archer-Hind, whose interpretation I will consider first, finds here two chief difficulties.

The first is in the words: *τοιούτων τι καὶ ἐγὼ διενόηθην, καὶ ἔδεια, μὴ παντάπασιν τὴν ψυχὴν τυφλωθείην βλέπων πρὸς τὰ πράγματα τοῖς ὀμμασι καὶ ἐκάστη τῶν αἰσθήσεων ἐπιχειρῶν ἄπτεσθαι αὐτῶν* (99 E). Pp. 191, 192: "Now if we examine the obnoxious sentence, we shall see that it is in itself confused and inaccurate. After *τὴν ψυχὴν τυφλωθείην*, which gives us the thing symbolised, we have a sudden and perplexing transition to the symbol in *βλέπων πρὸς τὰ πράγματα τοῖς ὀμμασι*: the mind's eye and the body's eye are jumbled most incoherently together; for the deprivation of mental vision is given as the result of action on the part of the bodily organ. And in the next breath we have *ἐκάστη τῶν αἰσθήσεων ἐπιχειρῶν ἄπτεσθαι αὐτῶν*, which is not even germane to the metaphor. Surely these are two serious defects." P. 135, note: "*πρὸς τὰ πράγματα*, i.e. the ideas themselves." Strictly however it is clear that metaphor enters, not with *βλέπων*, but with *τυφλωθείην*; and if, as I have tried to show, the *πρώτος πλοῦς* is not concerned with the ideas, *τὰ πράγματα* cannot be taken as meaning "the ideas themselves." It is possible that there is a reference in *τὰ πράγματα* to the thing symbolised. But it is simpler to take the words following *τὴν ψυχὴν* as unmingled metaphor, *τὰ πράγματα* being simply 'things' (*σώ-*

ματα) as opposed to their εἰκόνες, e.g. reflections in water. This sentence then merely states that the πάθος of the observer of an eclipse is to be transferred to the soul, and adds a new metaphor. (Perhaps τὰ πράγματα is substituted for τὸν ἥλιον ἐκλείποντα for the sake of the new metaphor.) It is the next sentence that contains the interpretation of the symbol: ἔδοξε δὴ μοι χρῆναι εἰς τοὺς λόγους καταφυγόντα ἐν ἐκείνοις σκοπεῖν τῶν ὄντων τὴν ἀλήθειαν. λόγοι correspond to the εἰκὼν of an eclipse, and τῶν ὄντων ἡ ἀλήθεια corresponds to the ἥλιος ἐκλείπων itself. And I see no reason why Plato should not introduce a new metaphor. The only possible objection to a new metaphor would be, not that it is not germane to the original metaphor, but that it is unfit to represent what is symbolised.

The second difficulty discussed by Mr Archer-Hind refers to the sentence which immediately follows the simile and qualifies its exactness: ὥσως μὲν οὖν ὃ εἰκάσω τρόπον τινα οὐκ ἔοικεν· οὐ γὰρ πᾶν συγχωρῶ τὸν ἐν τοῖς λόγοις σκοπούμενον τὰ ὄντα ἐν εἰκόσι μᾶλλον σκοπεῖν ἢ τὸν ἐν τοῖς ἔργοις (99 E—100 A). Pp. 189, 190: "Though I admit these concepts are but images of the realities, mind I don't allow that they are so in any greater degree than material phenomena: both in fact are images; but whereas phenomena are the images presented to us by our senses, concepts are the images deliberately formed by our understanding; concepts therefore are more real than phenomena in proportion as understanding is more sure than sense." This interpretation plainly depends on the assumption, which I have tried to disprove, that λόγοι are to be distinguished from εἶδη and are related to them as εἰκὼν to ὃ ἔοικε. Again Mr Archer-Hind says (p. 136, note): "ἔργα here = the particulars. The word is used because of the familiar antithesis with λόγος; not I think with a view of denoting the particulars as works or products of the ideas whence they derive their existence." But is there any reason why ἔργα should mean anything but the familiar antithesis of λόγοι, i.e. reality or act as opposed to thought or word? So interpreted ἔργα would = εἶδη, and Plato's intention in qualifying the simile would be to warn his hearers that the distinction between λόγοι and εἶδη is not relevant to his present purpose, that it is not the former that are to be treated as εἰκόνες of the latter, but that both together—λόγοι + εἶδη—are εἰκόνες of τὸ βέλτιστον, the supreme reality.

Mr C. E. Campbell's interpretation must be considered next. He suggests (*J. of P.*, XXIII. pp. 76—80) that the words ἔδοξε τοίνυν...αὐτοῦ at the beginning of ch. XLVIII. refer to the δεύτερος πλοῦς alone, not to the πρῶτος πλοῦς, and

indicate that there are two possible ways of pursuing the former. And the words taken by themselves may very well have this meaning. But it is difficult to follow Mr Campbell in his account of the actual methods of investigation referred to by Plato. In the first place Mr Campbell seems to identify the study of εἶδη with the πρῶτος πλοῦς: "The clause τοιοῦτόν τι...αὐτῶν must refer to a rival method of prosecuting the second-best course and is not to be regarded as the description of results apprehended from seeking immediate familiarity with the Good itself or its special determinations in the world of ideas, which, as Mr Archer-Hind justly remarks, were regarded by Plato as forms of the ἀγαθόν itself" (p. 77). But, as I have tried to show, this is inconsistent with the account of the δεύτερος πλοῦς actually given by Plato, 100 A—101 E. In the second place Mr Campbell supposes what is on his interpretation the inferior method of pursuing the δεύτερος πλοῦς to consist in the investigation of particulars. He therefore regards the difficult sentence τοιοῦτόν τι...αὐτῶν as not metaphorical and takes πράγματα to mean "material particulars and not the ideas." This gives the proportion, ἥλιος ἐκλείπων : its εἰκὼν in water = πράγματα (material particulars) : λόγοι, in respect of 'brightness.' However "on general grounds, as Mr Archer-Hind has pointed out, it is inconceivable that Plato should have spoken of phenomena as dazzling from surpassing brilliance" (p. 79). Therefore *really*, according to Mr Campbell, it is λόγοι that are 'brighter' than πράγματα and not *vice versa*. Hence the point of the simile is in the fact that the sun is eclipsed, and its truth is contained in the qualifying clause, ἵσως μὲν οὖν...ἔργοις, which practically reverses the original simile. In a word Mr Campbell explains the original simile, which is inconsistent with his interpretation of the passage as a whole, as ironical and to be taken in an opposite sense. This is obviously a dangerous device and I do not think that it is appropriate here. But I do not propose to discuss the general question of the marks by which Platonic irony is to be recognised.

One other point in the summary of *Phaedo* 95 E—105 D given above requires, perhaps, elucidation and expansion. We saw that any ὑπόθεσις may be regarded in either of two ways, (1) as to its 'results,' ὀρμηθέντα, and (2) as to its validity. In explaining the former Plato uses the following words (101 D): εἰ δέ τις αὐτῆς τῆς ὑποθέσεως ἔχοιτο, χαίρειν ἐφ' ἧς ἂν καὶ οὐκ ἀποκρίναιο, ἕως ἂν τὰ ἀπ' ἐκείνης ὀρμηθέντα σκέψαιο εἰ σοὶ ἀλλήλοις συμφωνεῖ ἢ διαφωνεῖ. Mr Jackson would reject these words, and Mr Archer-Hind, besides making philological objections to them, says that the words ἕως ἂν...διαφωνεῖ "are in themselves sheer nonsense. If a hypothesis is proposed to account

for a given set of facts, we proceed to observe not whether the facts are consistent with each other but whether they are consistent with the hypothesis." This objection seems to me to confuse precisely the two questions which Plato insists should be kept separate. For the agreement of the hypothesis with facts belongs to the other question, the question of the validity of the hypothesis, and has nothing to do with the consistency of the results derived from that hypothesis. Plato is not thinking of an *ὑπόθεσις* in the sense in which 'hypothesis' is used in inductive science, but primarily of the consistent use of a common name. The *ὑπόθεσις* is the definition of the common name, by means of which definition we are able to use the name in such a way that we never contradict ourselves, i.e. never say that a particular thing both is and is not *x*. Thus the object of the definition may very well be described as consistency with one another of the results of the definition. If the matter is to be illustrated from science, one would most naturally find an example of what Plato means, not in inductive science, but in algebra, where certain laws (e.g. $ab = ba$ or $a\beta \neq \beta a$) are assumed, and the sole test is consistency. These are not so much laws as definitions, at once of the fundamental or simple operations of the science and of the symbols that are subject to these operations.

Our results, so far as we have gone, may be summed up as follows. The peculiar method of Plato is the method of Ideas. *λόγος* and *εἶδος* mean the same thing expressed in terms of thought or language and of reality respectively¹. It follows from this fundamental identity that the relations among *εἶδη* are the same as the relations among the corresponding *λόγοι*, and again that the relation of '*x*' to the particular *x*'s, which is described vaguely in the *Phaedo* as *παρουσία, κοινωνία*, is the same as that between the definition of *x* and the particular propositions of the form 'this is *x*.' A *λόγος* (or *εἶδος*), further, is the germ of scientific knowledge, that is, of knowledge which is self-consistent. If a *λόγος* is attacked, it must be brought under a higher *λόγος*, which is regarded by the objector as *ικανός*. And plainly the doctrine of the *Phaedo* implies that corresponding to *τὸ βέλτιστον* there is a *λόγος* which is *ικανός* without qualification. In this way the *Phaedo* undoubtedly implies that *τὸ βέλτιστον* is an *ιδέα* in the widest sense of the

¹ Mr Archer-Hind notes the approximation to Aristotelian doctrine in the use of *οὐσία* in *Laws* 895 D where *οὐσία, λόγος* and *ἄνωμα* are distinguished (*Phaedo*, p. 136, note). It is difficult to see how he comes to think that Plato opposes *λόγος* to *εἶδος*, whereas in Aristotle they are practically convertible; e.g. the soul is defined by Aristotle indifferently as *οὐσία ὡς εἶδος*, as *οὐσία ἢ κατὰ τὸν λόγον* and as *λόγος*, of body.

word. But at the same time from another point of view the *Phaedo* opposes εἶδη, in a narrower sense, to τὸ βέλτιστον which is at once an idea and more than an idea.

The passage of the *Republic* (504 D—534 E), which I propose to examine, can be divided readily into four sections: (a) the Similitude of the Sun, 504 D—509 B: (b) the Divided Line, 509 C—511 E: (c) the Cave, 514 A—521 B: (d) the stages in the education of the guardian, explained with reference to the parts of the Divided Line, 521 C—534 E.

The Similitude of the Sun is introduced in the following way. In the fourth book the virtues of the guardian had been explained in outline. Plato now, in the sixth book, endeavours to trace these virtues to their central principle, τὸ μέγιστόν τε καὶ μάλιστα προσήκον μάθημα. This is familiar to his hearers: πάντως αὐτὸ οὐκ ὀλιγάκις ἀκήκοας.....ὅτι γε ἡ τοῦ ἀγαθοῦ ἰδέα μέγιστον μάθημα, πολλάκις ἀκήκοας, ἣ δίκαια καὶ τὰλλα προσχρησάμενα χρήσιμα καὶ ὠφέλιμα γίγνεται (504 E, 505 A). Jowett remarks: "It is remarkable that although Plato speaks of the idea of good as the first principle of truth and being, it is nowhere mentioned in his writings except in this passage" (Introduction to translation of *Republic*, p. xcvi. Bosanquet, p. 238). But we can have no difficulty in finding here, with Mr Jackson (*J. of P. x.* p. 137), a reference to the passage of the *Phaedo*, which I have discussed above, for we have just seen that there the idea of the good is at least implied. The change of words (from τὸ βέλτιστον to ἡ τοῦ ἀγαθοῦ ἰδέα) is perhaps what we might expect, for, as we shall see, the drift of the present passage is to connect the supreme idea, more explicitly than in the *Phaedo*, with the lower εἶδη. In fact τὰγαθὸν and ἡ τοῦ ἀγαθοῦ ἰδέα are here used indifferently, while in the *Phaedo* only the former occurs. Here too, as in the *Phaedo*, Plato at first avoids a direct account of the ἰδέα τοῦ ἀγαθοῦ. In the earlier dialogue he explained how, when he failed to discover τὸ βέλτιστον itself, he had fallen back on the study of εἶδη. Here his object is different. He wishes to insist on the necessity of a knowledge of the supreme 'idea,' and therefore he modifies his earlier similitude. Using again an illustration drawn from the sense of sight, he now points out that sight differs from the other senses in being more complex. Besides faculty and object there must be light or the sun. This in sight corresponds to the ἰδέα τοῦ ἀγαθοῦ in thought. In the *Republic* Plato emphasizes the function of the sun itself in the visible world; in the *Phaedo* the function of an image of the sun.

The ἰδέα τοῦ ἀγαθοῦ then on the one hand causes ἐπιστήμη in the faculty, on the other, ἀλήθειά τε καὶ τὸ ὄν in τὰ νοούμενα. And, Plato adds, just as the sun is the cause of γένεσις

καὶ αὐξή καὶ τροφή το τὰ ὀρατά, so the *ἰδέα τοῦ ἀγαθοῦ* is the cause of τὸ εἶναι τε καὶ τὸ ὄν το τὰ νοούμενα. It is obvious that this extension of the simile is somewhat forced. The words *γένεσις καὶ αὐξή καὶ τροφή* suggest chiefly organic creatures, whereas τὰ ὀρατά should include indifferently the organic and the inorganic. In fact, in the extension of the simile what is illustrated is really clearer than the illustration. The effect of the extension is simply to emphasize the doctrine that 'existence' corresponds unconditionally in the world of ideas to intelligibility or truth, εἶδος το λόγος, reality to validity. While the *ἰδέα τοῦ ἀγαθοῦ* is the cause of οὐσία, it nevertheless, Plato explains, is not itself οὐσία but 'exceeds it in priority and power.'

It is necessary to notice further that the sun is described by Plato not only as like the good but also as its product (ὅς δὲ ἔκγονός τε τοῦ ἀγαθοῦ φαίνεται καὶ ὁμοιότατος ἐκείνῳ...506 E). As Mr Bosanquet points out (p. 241) the notion of effect is associated in Plato's mind with the notion of something *made like* the cause. Thus the sun is not used in the present passage merely as an illustration of the good. It is at least a natural symbol for that idea. The importance of this will presently appear in the interpretation of what follows the similitude of the sun. One may note in passing that Plato's reconciliation of the fact that the sun is the ἔκγονος of the good with his later statement (509 B) that just as the good is superior to οὐσία so the sun is not itself γένεσις can be learned from the *Timaeus* (41 AB).

I come now to the Divided Line, and I will begin by indicating the points in which it agrees with the doctrine of the *Phaedo*.

Segment (3) stands for the mathematical and kindred sciences, which start ἐξ ὑποθέσεων and proceed, not to an ἀρχή, but, by agreement (ὁμολογουμένως), to a conclusion or end (τελευτή). Similarly, in the *Phaedo* a λόγος or εἶδος is assumed and all results consistent with it are admitted as true. Segment (4) consists in a movement from an ὑπόθεσις to an ἀρχή ἀνυπόθετος, whence the mind returns to the ὑπόθεσις with which it started, in this way transforming that 'assumption' or 'presupposition' into a conclusion from a genuine ἀρχή. This ἀρχή ἀνυπόθετος, i.e. the *ἰδέα τοῦ ἀγαθοῦ*, is plainly the 'highest' λόγος implied in the *Phaedo*, corresponding to τὸ βέλτιστον. Further, the scheme of the Divided Line implies, precisely as in the *Phaedo*, that the objects of the mind in (3) are εἰκόνες of those in (4). For (3) : (4) = (1) : (2), and (1) represents εἰκόνες of the objects of (2).

If we add that (2) consists of animals and 'things that grow

and are made' (σώματα?) and that the mind in (3) uses the objects in (2) to illustrate its εἶδη, the above may be taken as a preliminary outline of the doctrine of the Divided Line. Our next step must be to correct and fill up this outline, by comparing it in detail with the text, and with the various interpretations that have been suggested.

We may begin with the easiest segments (1) and (2). It has been maintained, on the one hand (by Mr Jackson, *J. of P.* x. p. 135), that the objects in these segments are purely illustrative of those in (3) and (4): on the other, that they are not illustrative at all, but have a distinct, although an inferior, reality of their own. In the first place one must observe that these interpretations may both be true. For as we saw above the notion of an inferior or dependent or created reality is hardly distinguished in Plato's mind from that of an image or likeness of the superior reality. But as a matter of fact the balance of evidence seems to be in favour of the view that Plato's primary intention was to represent reality by a quadripartite line. There are however several facts that seem to make against this view. The Divided Line is introduced as if it were a completion of ἡ περὶ τὸν ἥλιον ὁμοιότης. But perhaps it is intended merely to show wherein the similitude of the sun was deficient and to lead the way to the Cave, which is the true completion of the earlier similitude. Again, the Divided Line explicitly professes to represent a division of things into two kinds, τὸ νοητὸν and τὸ ὁρατὸν. But as a matter of fact segments (1) and (2) are not confined to objects of sight. In 510 E 'πλάττουσι' suggests touch: in 511 C 'αἰσθητῶ (not ὁρατῶ) παντάπασιν οὐδενὶ προσχρώμενος' is applied to the process of thought in (4): and, if we take into account the pages that follow the Cave, 521 C—534, a passage which is plainly a mere expansion of the Divided Line, we find that the concrete counterparts of the abstractions of geometry are called ὁρατὰ ἢ ἀπὸ σώματα (525 D). We know too how sight as the most important of the senses tends to take the place of sense in general. But what seems to me to decide the question is the fact that the sun is not mentioned in the Divided Line, or in the passage 521 C—534. Exclusive reference to sight was hardly essential to the similitude of the sun, for that similitude was extended to include the creative activity of the sun, and plainly a thing is not created quâ visible rather than quâ, let us say, tangible. But the sun was essential, and absence of reference to it can mean only that the use of similitude is abandoned.

In the interpretation of segments (3) and (4) we meet the same difficulties as in the *Phaedo*. Mr Jackson's view can be

gathered from the following (*J. of P.* x. p. 136): "That the superior object is the idea is indicated at 510 BD, 511 B, and is indeed generally acknowledged. What then is the inferior object, 'the image or reflection of the idea'? In the case of every group of particulars to which we give the same name, we assume the separate existence of an idea in which these particulars participate. This idea is the whole completed connotation of the name, as it would be understood by omniscience, hypostasized. Now the general notion is the connotation of the name as we imperfectly understand it, not hypostasized. For example, the idea of sulphur is, hypostasized, the whole sum of the properties, known and unknown, which are common to specimens of sulphur: the general notion of sulphur includes, not hypostasized, so many of these as are known to us. The general notion is therefore not the idea, nor a correct and complete representation of the idea but an incorrect and incomplete representation of it. May we not assume, apart from any indications to be found in Plato's account of the methods of investigation, that by 'the image of the idea' he means the general notion?"

In the first place one would point out that this seems to confine ideas to segment (4) whereas there is reference in the text to ideas in segment (3), *e.g.* in 510 D to τὸ τετράγωνον αὐτό. But as Mr Jackson himself admits this (note, p. 136) it will be necessary to examine the chief support of his theory, namely his distinction between λόγοι and εἶδη. This question might have been raised with respect to the passage in the *Phaedo*, but it is more convenient to discuss it now in connection with the Divided Line.

The sciences that fall in segment (3) are chiefly mathematical (510 c). It is safer therefore to take one of Plato's own examples, *e.g.* a σχῆμα or geometrical figure, say a circle, rather than Mr Jackson's example of sulphur, which is certainly not the kind of thing that Plato had in view. In geometry a circle is defined and a number of properties are deduced from the definition. According to Mr Jackson's view the idea of a circle contains more properties than are given in geometry. If by 'properties' are meant deductions from the definition, this is plainly true, but it would be no reason why the definition should be regarded as imperfect. If 'properties' means qualities generally, then the implication is that circles have 'properties' which cannot be derived from the definition, that circles are not only *x* as geometry says but are really *xy*, where *x*, *y* are coordinate qualities common to all circles and such that no *x* is not *y*. But is this possible? To make the case more plain one might say that it is equivalent to the supposition

that a circle can be represented in Cartesian coordinates by an equation different in type from $a(x^2 + y^2) + bx + cy + d = 0$. The case of sulphur is really similar, although it is less obvious than an example from geometry. For the only possible definition of a specimen of sulphur must be 'That which possesses the qualities x ascribed by us to sulphur.' Any finite number of specimens might have y in common as well as x , but that would give us no right to say that all possible specimens of sulphur are y as well as x , unless y is causally dependent on x . As before, if y is causally dependent on x , the distinction would be, not between what we know and what really is, but between our definition and a complete development of what it implies¹. Lastly, one would ask what is the precise meaning of 'hypostasize'? An *εἶδος* corresponds to a definition, i.e. a proposition or judgment, and it is hard to see how one could hypostasize a judgment.

Plato's account of the relation of segment (3) to the other segments is obscure and inconsistent. According to the opening words of the passage (*ὥσπερ τοίνυν γραμμὴν δίχα τετμημένην λαβὼν ἄνισα τμήματα, πάλιν τέμνε ἐκάτερον τμήμα ἀνὰ τὸν αὐτὸν λόγον*, 509 D) the segments (1) (2) (3) (4) ought to be represented by a ar ar^2 ar^3 , where r is the ratio of a thing to its image. This would make (3) equal to (2) in respect of *σαφήνεια καὶ ἀσάφεια*. But, elsewhere, Plato says that (3) uses as *εἰκόνες* objects taken from (2) so that $(3) = ar^2$ if $(2) = ar$. And he says also (511 D, cf. 533 D) that *διάνοια* the faculty of (3) is *between νοῦς* the faculty of (4) and *δόξα* the faculty of (2). It is, however, perhaps not necessary to take *ἀνὰ τὸν αὐτὸν λόγον* as meaning strictly 'in the same ratio,' since *ἀναλογία* includes both arithmetical and geometrical progression, and *ἄνισα* suggests the former kind of progression rather than the latter. On the whole it seems safe to say that both the segments (3) and (2) are of an intermediate character. The objects in each are complexes—in (2) material compounds, in (3) combinations of the material and the ideal. (1) and (4) alone are single in character, the latter being what is entirely self-consistent,

¹ A distinction similar to Mr Jackson's is made by some writers on Logic, e.g. Mr Keynes (*Formal Logic*, 2nd ed. p. 27) suggests that the name 'comprehension' might be given to "all the attributes possessed in common by all members of the class denoted by the name." Without doubt, if it were necessary to have a word which should mean indiscriminately the primary and the dependent attributes of a term, 'comprehension' would serve the purpose well. But, if I rightly understand Mr Jackson, the distinction between primary and dependent attributes is vital to his purpose, for I do not think that Mr Jackson would suggest that the various *τελευταίαι* arrived at in geometry are a closer approximation to the *εἶδος* than the definition from which they are derived.

the former what is merely inconsistent. A better diagram perhaps for Plato's purpose would have been a line *ABCD* divided into three parts, *BC* serving the double function of being the lower segment of *AC* and the upper segment of *BD*.

With respect to segment (4), it is perhaps worth while to notice that the mental process represented by it is probably suggested by the geometrical method of proof by analysis, the invention of which is ascribed to Plato. In the *Meno* (86 E, 87 A) there is a description of Reduction (*ἀπαγωγή*) which consists in reducing the truth of a proposition (say *y*) or the solution of a problem to the truth of another proposition (say *x*) or the solution of another problem. Here *x* is not known to be true; we know only that *if x* is true then *y* is true. The method of proof by analysis differs from this in two ways: (1) it provides a definite process for passing from *y* to *x*, and (2) *x* is known to be true, i.e. the method results in proof (or solution in the case of a problem). The process of passing from *y* to *x* is presumably deduction, that is, *y* is provisionally assumed and deductions are made from it. If one of these deductions, *x*, is known to be true and *if y* can be deduced from it, then *y* is proved. The essential condition of the method is therefore that not only should *x* be derivable from *y* but that also *y* should be derivable from *x*. Reductio ad absurdum consists in the *disproof*, by analysis, of *y*. Here *x*, which is self-contradictory, is derived from *y*, and we can of course, since the consequent is denied, argue back to the falsity of *y*. The first explicit reference to proof by geometrical analysis is, I suppose, in *Nic. Ethics*, 1112 b 15—21: ἀλλὰ θέμενοι τέλος τι, πῶς καὶ διὰ τίνων ἔσται σκοποῦσιν, ... δι' ἐνὸς δ' ἐπιτελουμένου πῶς διὰ τούτου ἔσται κάκεινο διὰ τίνος, ἕως ἂν ἔλθωσιν ἐπὶ τὸ πρῶτον αἴτιον, ὃ ἐν τῇ εὐρέσει ἔσχατόν ἐστιν· ὁ γὰρ βουλευόμενος ἔοικεν ζητεῖν καὶ ἀναλύειν τὸν εἰρημένον τρόπον ὥσπερ διάγραμμα¹.

¹ In reference to this passage in the *Ethics*, Mr J. A. Stewart (*Notes on the Nic. Ethics*, I. pp. 262—266) speaks of the 'Analytical Method of proof in Geometry' and in explanation of the method quotes from D. Stewart: "If in this deduction I arrive at a consequence which I already know to be true, I conclude with confidence that the principle from which it was deduced is likewise true. But if on the other hand I arrive at a consequence which I know to be false, I conclude that the principle or assumption on which my reasoning has proceeded is false also. Such a demonstration of the truth or falsity is called an Analytical Demonstration." In point of fact no geometer would suppose for a moment that a proposition is proved because true consequences can be drawn from it: to do so would be to admit into geometry probable reasoning (cf. *Ethics*, 1094 b 26). The case of inferring from a given proposition a proposition known to be false is of course entirely different. In geometry, I take it, all proof as such is synthetic. Analysis is not a kind of proof, but only a way of discovering proof.

Here what takes place in the practical sphere (where y is a τέλος and x is δυνατόν or δι' ἡμῶν) is explained by the analogy of geometrical analysis. Plato's account of segment (4) seems to correspond with this method point to point. First the ἀρχαὶ of the sciences are provisionally assumed (τὰς ὑποθέσεις ποιούμενος οὐκ ἀρχάς, ἀλλὰ τῷ ὄντι ὑποθέσεις, ὅλον ἐπιβάσεις τε καὶ ὁράς, ... 511 B); then the mind proceeds upwards to an ἀρχὴ ἀνυπόθετος: lastly it returns to the place whence it started, that is, to the ἀρχαὶ of the science which have now become the τελευταὶ of dialectic.

Compared with the Divided Line, the similitude of the Cave presents little difficulty. I will first state the most obvious interpretation and then consider objections.

If we call the Cave and its accessories (a), and the similitude of the Sun (b), we find that the passage 514 A—521 B employs a complex symbol (a) + (b'), where (b') is practically the same as (b) but differs from it in complexity. (b') is the same as (b) in so far as it is a symbol taken from the facts of light, and a symbol which represents the world of ideas, i.e. segments (3) and (4) of the Divided Line; it differs from (b) because it contains more distinctions, among others the distinction between the segments (1) and (2). The symbol (a) is carefully composed so as to suggest a world which is less real than (b'). Instead of the sun, we have in (a) the light of a subterranean fire: instead of the products of art and nature, we have only works of art, among those the merely mimetic products of fine art holding a conspicuous place (σκεῦη τε παντοδαπά... καὶ ἀνδριάντας καὶ ἄλλα ζῶα λίθινά τε καὶ ξύλινα καὶ παντοῖα εἰργασμένα, 515 A): instead of shadows and reflections caused by the sun, we have shadows only, caused by the light of the fire. From these facts only one conclusion seems to be possible. The complex symbol (a) + (b') represents the Divided Line, or, in other language, the Cave completes the similitude of the sun by supplying a symbol for segments (1) and (2). One may add that just as (b') is compounded of (b) and segments (1) and (2), so also what is represented by (a) is not so much the original segments (1) (2) as these segments compounded with (b). The sun must have a place in the sensible world, to correspond to the fire in the Cave, but the fact that what is represented by the Cave is really the sensible world and not the world of sight only is perhaps hinted at in the echoes from the back of the Cave which the prisoners are supposed to hear.

Mr Jackson's view agrees with the view just explained in recognising that the Cave together with segments (1) and (2) form a complex symbol for the whole of reality. But since he regards (1) and (2) as merely illustrative of (3) and (4) and

seems to think that it is impossible to "treat part of the imagery as part of the interpretation" (p. 140, note) he is led to invent two terms as the interpretation of the Cave, 'particulars as apprehended by the senses,' and 'particulars as they are in themselves.' These new terms are plainly suggested by his view of segments (3) and (4) as representing *λόγοι* and *εἶδη* respectively, but, so far as I can see, they have no warrant in the actual text. Mr Jackson takes *ἀφομοιοῦντα* in 517 A, *ταύτην τοίνυν...τὴν εἰκόνα...προσαπτέον ἅπασαν τοῖς ἐμπροσθεν λεγομένοις, τὴν μὲν δι' ὅψεως φαινομένην ἔδραν τῇ τοῦ δεσμοτηρίου οἰκῇσι ἀφομοιοῦντα, τὸ δὲ τοῦ πυρὸς ἐν αὐτῇ φῶς τῇ τοῦ ἡλίου δυνάμει*, to mean 'paralleling' not 'comparing' or 'likening' the ordinary rendering. That is, Mr Jackson, if I understand him, makes *ἀφομοιοῦντα* refer to correspondence between parts of the symbol, and not to correspondence between symbol and interpretation. Either rendering would suit equally the view which I have explained.

According to Prof. Lewis Campbell, the chief difficulty with respect to the Cave is the interpretation of the *ἀγάλματα σκευαστά*, the shadows of which are thrown on the back of the Cave. Prof. Campbell suggests (*Rep.* II. p. 16) that these *σκευαστά* represent "the realities of *γένεσις*, Nature as the embodiment of the ideas, the facts of human experience as they really happen and not as they seem." Again, more explicitly: "The *ἀγάλματα* are not themselves immediately perceived by sense at all. It is only when the individual mind has been freed by Socratic questioning, and turned about, and asked what is it? (*τί ἐστι*;)...that the soul begins to have an inkling of that world, which was dimly represented to her in crude experience,—of a real finger, of a real square, of the Sun himself as an embodied god, &c....The 'manufactured articles' here exhibited by unseen powers correspond, not to the *εἰκόνες* of the geometers, but to the realities typified by them." Apparently this interpretation of the *ἀγάλματα* leads Prof. Campbell to say that "in passing onwards from the conclusion of Bk. VI. to the allegory of Bk. VII., the ground is insensibly shifted, as the idealizing impulse gathers strength, so that not only the distinction between *πίστις* and *εἰκασία* is dropped (since from the higher point of view the sensible world consists entirely of images), *all* ordinary experience being now merged in *εἰκασία*, but the actual scientific processes which rank with *διάνοια* in Bk. VI. are now degraded to the level of ordinary experience," and to find "some confusion" in Plato's statement that the light of the fire represents the sun, "for the objects seen by the denizens of the Cave are not lights but shadows." It is easy to see that Prof. Campbell's interpretation of the

ἀγάλματα depends on the assumption that the prisoner in the Cave who sees only shadows corresponds to the ordinary uneducated man. But is there sufficient ground for this assumption? The conclusion to which it leads seems improbable, for it is unlikely that a change of doctrine should be introduced in an allegory, since the primary purpose of an allegory is merely to illustrate. And this consideration seems to have special force in the case of the Cave, since the passage which immediately follows it is not symbolic and nevertheless repeats in explicit terms the distinction made in Bk. VI. between *εἰκασία* and *πίστις* (534 A).

Strictly there are two stages in the education of the prisoner in the Cave, (1) when he is freed from his fetters and allowed to see the *ἀγάλματα* and the fire, and (2) when he is 'reluctantly dragged up a steep and rugged ascent' and enabled to see the sunlit world and ultimately the sun. Since the light of the fire is to correspond to the sun the inevitable inference is that the ordinary uneducated man corresponds to the prisoner after he has been freed so as to be able to see the *ἀγάλματα* and the fire. The prisoners who see only shadows are 'like us' but represent a more extreme case of the same defect—the defect of knowing only a part of reality and taking it to be the whole. Thus the Cave contains two symbols for ordinary experience. One only of these is to be interpreted strictly: the other is introduced for the sake of greater emphasis. As to the *ἀγάλματα*, our conclusion must be that they correspond to the objects of segment (2) of the Divided Line and therefore to the *εἰκόνες*, and not to the *εἶδη*, of geometry.

The pages 521—534 E which follow the Cave practically repeat, from a new point of view, the doctrine of the Divided Line. They contain, however, two points which call for special attention.

The first is the account (521 C, *seq.*) of the way in which the mind is led from segment (2) to (3). Some things in the former are *ἐγερτικὰ τῆς νοήσεως* while others are not. For instance a finger does not incite to reflection, or in other words is adequately, that is, consistently, apprehended by *αἴσθησις* and has no *εἶδος* corresponding to it. On the other hand, the perception of greatness and smallness, thickness and thinness, hardness and softness, tends to contradict itself and requires therefore for its correction the services of a higher faculty.

The second point worthy of notice in the account of the education of the guardians is a reference to arithmetic 525 DE: *οἶσθα γὰρ πον τοὺς περὶ ταῦτα δεινούς ὥς, εἰάν τις αὐτὸ τὸ ἐν ἐπιχειρῇ τῷ λόγῳ τέμνειν, καταγελωσί τε καὶ οὐκ ἀποδέ-*

χονται, ἀλλ' ἐὰν σὺ κερματίζῃς αὐτό, ἐκείνοι πολλαπλασιούσιν, εὐλαβούμενοι μὴ πότε φανῇ τὸ ἐν μὴ ἐν ἀλλὰ πολλὰ μόρια. The precise meaning of this is obscure. It must mean (1) that units cannot be unequal: but it may also mean (2) that a unit is to be regarded as indivisible. The latter meaning would exclude from arithmetic fractions and ratios in general.

Although the references at the beginning of Bk. x. to the Theory of Ideas are obviously, as Prof. Campbell points out, merely illustrative, perhaps I may with advantage devote a few words to them. The productions of fine art are classed with the reflections of segment (1) of the Divided Line. Each is a copy of an object in segment (2), for example, a bed. That object in turn is a copy of an *ιδέα* which exists *ἐν τῇ φύσει* and is made by God. Again, three kinds of knowledge are distinguished: (1) that of the *μιμητής*, (2) that of the maker of the *σκεῦος*, *ὀρθή πίστις*, and (3) that of the man who uses the *σκεῦος*, *ἐπιστήμη*. Thus distinctions (*ιδέα* and *ἐπιστήμη*), which in Bks. vi. and vii. fall outside segments (1) and (2), are made to fall inside these segments in Bk. x. The explanation of the discrepancy must be that Plato has here modified his real theory for the temporary purpose of depreciating fine art. The same explanation will hold of 596 A *εἶδος γὰρ πού τι ἐν ἑκάστῳ εἰώθαμεν τίθεσθαι περὶ ἕκαστα τὰ πολλὰ, οἷς ταῦτόν ὄνομα ἐπιφέρομεν*. In Plato's normal theory this proposition is not true, as is shown by the example of a finger in Bk. vii.

We have now before us an outline of Plato's Theory of Ideas, in so far as it is expressed in the most important passage of the earlier dialogues. I do not propose to draw from this outline any formal inferences with respect to the general character of the Theory of Ideas. Such inferences could be made with safety only after a study of the later dialogues. But it may be worth while to bring together some points, which seem to have come to the surface, as it were, in the preceding discussion.

1. An idea is the metaphysical equivalent of a definition. To us Definition is only a part of logical doctrine, to Plato it is a formula for all scientific thinking. Since a definition is the explanation of the *connotation* of a name, we may perhaps say that the Theory of Ideas of the earlier period tends to overrate the importance of the meaning of a term in connotation, as opposed to its meaning in denotation.

2. The relation between an *εἶδος* and the individuals that have the same name is expressed indiscriminately by two groups of words: (a) *παρεῖναι*, *μετέχειν*, *κοινωνία* &c., and (b) words

which imply that an individual is *like* its εἶδος. Besides the passages referred to above, *Phaedo* 73 E *seq.* may be mentioned as containing an important statement of the latter way of expressing the relation. The εἶδος is there represented as a kind of type or ideal at which the particulars aim (ὀρέγεται) unsuccessfully.

3. There is no attempt to explain the nature of the individual or particular as such. The peculiarity of each of τὰ πολλὰ is that it can 'share' in contrary εἶδη. But since such εἶδη have no κοινωνία, it inevitably follows that the particular breaks up into two parts which have no connection with each other. Or again, in terms of 'likeness,' we should ask in what the particular *differs* from the εἶδος? And Plato has no answer.

4. The position of mathematics is hopelessly ambiguous. It is said to use sensible εἰκόνες. But are these *necessary*? Plato seems to imply that they are not. Again, is there not a defect in his mathematical conceptions? He seems to insist on an abstract and absolute unit, which is indivisible, and therefore to exclude incommensurable quantities, and to limit arithmetic to the direct operation of multiplication.

III.—SENSE, MEANING AND INTERPRETATION. (II.)

BY V. WELBY.

TURNING now from Logic to Psychology, the first question which suggests itself is whether Interpretation,—its genesis, its processes, and its developments,—has hitherto received the same attention from psychologists which they so conscientiously bestow on all other mental processes. That it is a mental process no one would deny: and as such by universal agreement it falls within the scope of psychological inquiry. If it prove on examination that such attention has not hitherto been given, we may further ask if there is a good reason for this omission, and whether such reason has been duly explained to the reader.

Let us see then what Psychology has to teach us about Interpretation. Where does it begin in the ascending scale of life? How does it do its work? What are the stages of its advance? How is it related on the one hand to Attention, Perception, Memory, Imitation, Judgment, Inference, Conception, and on the other to the physiological phenomena of response to excitation? Again, to what does the process properly apply? How far is the term metaphorical and therefore only partially applicable? What is it that needs, or bears, or demands interpretation? Is it primarily simple sensation, rising to that highly complex experience, the hearing of articulately 'significant' speech? Or is it from the first the 'meaning' of this sensation—the 'meaning' of the first touch which to the Protozoon was the signal of 'food' or 'danger,' to the 'meaning' of the most abstract of propositions? Or should we rather here say, 'sense'? Does the living organism from its lowest beginnings in some 'sense' 'interpret' sense? And does this 'interpretation' gradually become more conscious and more complex until the 'senses' of temperature, of resistance, or effort, of touch, of sight, of smell and taste, of hearing, resolve themselves into the intellectual 'sense' in which all experience, but especially all language, is to be interpreted?

We are told much of the impulse to imitate or mimic, but

rarely or never of the equally deep and primordial impulse to 'sensify'—to touch with 'meaning'—every stimulus, excitation, imitation, impression, sensation, perception, idea, till we reach conception, which may be identical with the 'result of interpretation,' and is often identified with 'meaning.' If 'idea' is here left out it is only because our neglect of the 'sensifying' process helps to render it one of the most ambiguous of terms, as in the case both of 'experience' and 'reality.' Certainly the impulse to 'sensify,' which makes the import of every unit of consciousness or experience the measure of its importance, which makes it 'signify' just as much as it 'signifies,' needs quite as much analysis and is as much a part of true scientific training, as the impulse to discriminate or to compare. The habit of 'attaching' meanings is as dangerous as the habit of seeking or assuming analogies, and as useful as that of detecting minute but important differences.

Dealing with the primary intellectual functions Prof. Sully¹ gives us "(a) the initial stage, viz. the presentation of an object to sense, and the fixing the attention on this, and (b) the stage of Intellection proper, the act of perceiving, interpreting or recognising what is presented" (p. 61). Here we have Interpretation, with Signification, its condition and implication, incidentally coupled with Perception and Recognition. No further notice is taken of or use made of it: it is given no status whatever: we are left without any guidance as to the nature or function of Interpretation as distinct from the Perception which precedes, accompanies, or at least conditions it, and the Recognition which links past with present experience. Here then I would venture to suggest that significance and interpretation should receive in future more definite 'recognition,' and that we need the triad,—Presentation, Attention, Interpretation. Attention, we learn, "underlies and helps to determine the whole process of mental elaboration" (p. 167) and is a fundamental process, appearing as a reflex at the very beginning of mental development; the whole movement of which is determined by the co-operation of this factor. According to the law of attention that we pass at once from the sign to the 'thing signified,' we have acquired an invincible habit of passing instantly from the muscular sensations of the eye to the representations which they call up. That is, of *interpreting* sensation. The child learns to interpret as he learns to attend and to infer. Why is this supremely important mental activity—the immediate result of attention—the only one left unanalysed? And what do we suppose to be the genesis of 'sign'? What is the first

¹ *The Human Mind*, Vol. I.

moment when a sensation or a thing stands not for itself but for something else, draws attention not to itself but beyond itself? We shall of course be referred to memory. But with loss of memory is the idea of meaning obliterated or the 'sensifying' function atrophied? Or may not this remain as an unsatisfied craving, an unanswered 'What does it all mean'? How far is the doubling tendency to see everywhere thing plus meaning, or sign plus significate, ineradicable because primordial? Where does the 'calling up' process begin? When one sensation suggests another 'remembered' one? Is that the link between association and signification?

Prof. James¹ considers that the great difference between man and brute is that the former "has a deliberate intention to apply a sign to everything" (p. 356). "How, then, does the general purpose arise? It arises as soon as the notion of a *sign as such*, apart from any particular import, is born; and this notion is born by dissociation from the outstanding portions of a number of concrete cases of signification" (p. 357).

At least here we have what I would call the sensifying instinct raised to the highest importance and marking the advent of humanity. But what is here meant is the fully conscious, volitional, 'intentional,' reflective application of the sign: and in this sense we may welcome the definition of man as the sign-generator—rather than merely the sign-maker.

Prof. Baldwin² considers that "the ultimate basis of psychological interpretation and construction is the mental experience of the individual, in so far as it has universal meaning" (p. 19). "... It is only after the words assume meaning and sense to us," like all sensations or sense-impressions, "that they become permanent acquisitions" (p. 202). He teaches that "the final constructive product is a true mental unity or picture, which has its own significance for the mind, apart from its elements. This significance is an ideal meaning, which possesses general interest, and appeals to man universally" (p. 234).

Here we get an incidental definition of significance as 'ideal meaning,' which would surely be more instructive if we had begun with a section on, let us say, the nature of the relation between real and ideal 'meaning,' and the function of interpretation as applied in each case and with express reference to the idea of 'sense'. Further "the most important thing about interest is its quality as stimulating the will. A thing is

¹ *Principles of Psychology*, Vol. II.

² *Handbook of Psychology*, Vol. I.

³ Prof. Dewey's Article on "Knowledge as Idealisation" (*Mind*, Vol. XII. No. 47) calls attention strikingly and usefully to some of the questions here raised or implied.

interesting to me when, for any reason, it appeals to my attention—when it is worth looking at—when it is so related to me that I am led to investigate it; and the feeling of interest is this need of looking, investigating, finding out about" (p. 139). "In interests, therefore, we have a step in mental growth of enormous significance in psychological theory" (pp. 148—9)¹.

In 'interests' have we not in fact the key to the nature of 'sensifying' process? The 'feeling of interest' endows our surroundings with,—bestows upon them, attributes or ascribes to them,—somewhat which may be described as meaning or sense or significance: in other words makes them significant, suggestive, indicative, symbolical, and then prompts the function of interpretation. What is it that affects me? Where does it come from? What is it like? What will come of it? How shall I act upon it? are among the interpretative questions. It may be said that this subject is already discussed in logic and psychology under the heads of Attention, Perception, Memory, Judgment, &c. No doubt: but not from the point of view taken here. Sense *in the meaning sense* has never yet been taken as a centre to work out from: attention, perception, memory, judgment, &c. &c. have never been cross-examined from the direction of their common relation to a 'meaning' which has to be made out, a 'sense' which has to be mastered, a 'significance' which has to be felt, understood and acted upon. Before we ask, what is real? we not only need to ask the 'meaning' of the 'sense of reality' but the 'meaning' of the sense of 'sense'; the sense, intent, import, purport, of the perceptions which make up or bring us experience.

Prof. Ladd's works would supply materials for an independent Essay, and it is difficult to choose only one or two representative passages from his *Psychology*. But it may be noted that hardly any notice is taken of, or stress laid upon, this central factor of intelligence,—the reading of the messages of Sense, and of the *sense* of these messages from the stimuli by which perception is excited. Considering the enormous mass of careful detail which the book contains, surely a larger space might have been devoted to analysing not only the unifying grasp but the sensificatory and translative energy of the "interpretative consciousness."

But the inquiry suggested seems to be endless, since the domain of 'meaning' covers all that can be discussed to any purpose, or indeed in any rational sense. I must be content therefore with having roughly indicated some of the many directions in which enhanced clearness of thought might be the

¹ Baldwin, *Feeling and Will*.

reward of a hitherto neglected investigation, and pass on to deal with (2) the objection that the study for which I am pleading would be impossible, and even if not impossible would be undesirable, as tending to foster pedantry and shackle thought. But the very idea of its impossibility seems largely owing to its non-existence. From the moment when we begin to make everything else subordinate to that vital interest for which we have only as yet the vague and unanalysed expression which belongs to vague and unanalysed thought, its importance begins to reveal itself, to stand out and to demand a more worthy appreciation than has yet been vouchsafed to it. In any inquiry we may be forced at some point to recognise that what we have taken for an 'object,'—even in the widest sense—is rather a 'meaning' or a 'sense': and that the halo of reality or objective existence which we have thrown round it is just part of its essential prerogative: is just part, that is, of the quality of 'sense' which is the one character to be always safely ascribed to it.

Why are we tempted to suppose that it would be impossible to study the subject of meaning without re-opening all the traditional controversies of philosophy, merely to plunge us into an ocean of baffling problems of thought without hope of rescue? Surely because a vital point has been missed in our training—in the very theory of training! We have not had the sensifying and interpretative functions developed: their nature has not been explained to us nor their true importance pointed out¹.

Again, why do we imagine that such a study could only end

¹ It is a curious—and may we say a significant?—fact in this connection that the only instance I have been able to find of any direct attempt to consider exactly what we mean by 'meaning' occurs in a forgotten book of somewhat quaint dialogues called *The Philosophy of Things*. A expresses surprise that B has never once asked him what he means by the word *meaning*.

A. "We have been talking almost of nothing else but the meaning of words, and of the uncertainty of the meanings which are annexed to them, and yet you have never once asked me the meaning of this same most important word *meaning*!—the very pivot on which the whole of my argument turns—the very hinge on which it hangs!"

B. "But by the word *meaning* you intend the *sense* in which a word is to be understood."

A. "Ay—there it is. I ask you to give me gold for my paper, and you only give me another piece of paper. I ask you to give me a thing for my word, and you only give me another word."

* * * * *

B. "What then do you mean by the word *meaning*?"

A. "Be patient. You can only learn the meaning of the word *meaning* from the consideration of the *nature of ideas*, and their connexion with *things*" (pp. 78—9).

in rigid pedantry and the sacrifice even of such power of adaptation as language has already attained? Surely, once more, because of that unfortunate hiatus in our training already so much insisted on: and notably also from our failure to appeal to that organic analogy for language which is admittedly the best we have. When the force of this analogy is once realised it becomes amazing that we should suppose it possible to ignore the need for new phrases and words, and insist on the established vocabulary and forms sufficing us for the expression of new experiences. In other words it betrays a curious atrophy, in this one direction, of the adaptive power which has attained such advanced developments, and has so enormously modified and enlarged the outlook of life in the form of mechanical invention, whether for commercial or for scientific purposes, or merely for the furtherance of comfort and convenience. This tremendous supplementary outgrowth, this unexampled expansion of the range of sense and muscle, ought surely to rebuke the strange hopelessness, apathy and contented bondage to the outgrown and the outworn which keeps the development of adaptive *expression* so far behind that of invention and discovery and thus behind experience: which deprives us of whole quarries of fresh simile whereby to express fresh lines of philosophical thought: and which acts, so far as it goes, as an effectual barrier to the acquirement of a more profound and really scientific Psychology, and a Logic which shall command acceptance without question or reserve.

If it be rejoined that the growing powers of language are in fact recognised, used, stimulated and systematised by every means in our power and especially through every form of training, I would answer that as yet the only work even recognising them which I have been able to find is Dr Jespersen's. His title *Progress in Language* at least strikes the needed and missing note: and whether his special theories are or are not accepted, we owe him gratitude for boldly saying that language is advancing and must rise in scale and value and power, that we have even to learn that grammar must be servant and not master, and that whatever expresses best and signifies most should be systematically adopted, absorbed, and if need be, allowed to transform and amplify the current canons of expression.

After all, language is 'made for man' and not man for language: he ought not to be its slave. If it be objected that linguistic advance cannot be deliberately organised or even cultivated because it refuses to be controlled, and that it is hopeless to attempt to secure universal consent even to the most obviously needed changes, the answer is that we already

assiduously cultivate correct articulation, true intonation and pronunciation, accurate spelling, punctuation and grammatical construction, and obtain in each case substantially uniform usage. Why then not direct the attention of the young from the very first to what is yet more important, the need of fresh developments in expression and their right direction and control? Might we not further urge upon those who are our natural leaders and teachers in speech and writing the pressing duty of asserting the power of Man to train within obvious limits his function of linguistic expression as he already trains his touch and his vision,—and indeed his memory and his intellect? J. S. Mill¹ reminds us that mathematical study induces wariness: it has the great advantage of training the mind to make sure of its steps: “at least it does not suffer us to let in, at any of the joints in the reasoning, any assumption which we have not previously faced in the shape of an axiom, postulate, or definition” (p. 612).

And this is surely one benefit that we should reap by making significance and interpretation the subject of elementary study. It would form the best introduction to mathematics, and even act in this respect as its substitute in those cases where there was no mathematical aptitude in the student.

At present we have not even attained to an adequate conception of what an ideal language should be: we think of it, if at all, as the impossible thing that Bishop Wilkins proposed—a formalised dialect of culture with its phrases “rendered according to the genuine and natural importance of words,” as if this were anything but what their speakers intended by them! Or we try to invent an artificial ‘Volapük.’ It is surely time that the fetish of a possible Plain Meaning, the same at all times and places and to all, were thoroughly exposed, and students more explicitly warned against anything approaching it, except on the narrowest basis of technical notation. Even Dr Jespersen tells us that an ideal language would “always express the same thing by the same, and similar things by similar means; any irregularity and ambiguity would be banished; sound and sense would be in perfect harmony; any number of delicate shades of meaning could be expressed with equal ease: poetry and prose, beauty and truth, thinking and feeling would be equally provided for: the human spirit would have found a garment combining freedom and gracefulness, fitting it closely and yet allowing full play to any movement” (p. 365).

But the organic analogy forbids the metaphor ‘garment,’

¹ *An Examination of Sir W. Hamilton's Philosophy.*

since it sacrifices an essential truth. Thought is not merely 'clothed' in language. And the whole passage seems to ignore too much the modifying effect of circumstance and 'atmosphere' on 'meaning,' and the need for the ideal interpreter, keenly sensitive to delicate differences of sense, to whatever cause these were due: besides which the writer seems to forget that in order to have a really higher grade of significance, we must train a new generation in 'sensifics.' Indeed we even require to evolve skilled 'sensificians' able to disengage the most subtle over-tones of sense from the complex note of expression. There is a great deal of sound in the meaning-world, but not enough delicacy of discrimination. The sound is not fully articulate to us: we are more or less meaning-deaf. In a wider than technical sense 'asymbolia' is more generally present than we suspect. Yet if an ideal language and its ideal interpreter cannot yet at all events be hoped for or practically aimed at, it would be something to realise, as Mr Balfour claims that the philosopher has done, what *not* to do.

"It is something to discover the causes of failure, even though we do not attain any positive knowledge of the conditions of success. It is an even more substantial gain to have done something towards disengaging the questions which require to be dealt with, and towards creating and perfecting the terminology without which they can scarcely be adequately stated, much less satisfactorily answered" (p. 160)¹.

I would adopt this very language with reference to expression, its defects, its possibilities, its prospects of development. It would be something to discover the causes of our failure to express our whole or exact—what? It would be more to discover whether it was idea, conception, fact, meaning or thing which we oftenest failed to express.

Mr Romanes², following out an analogy between the evolution of language and that from the single- to the many-celled organism, remarks that "as in the one case there is life, in the other there is meaning; but the meaning, like the life, is vague and unevolved: the sentence is an organism without organs, and is generalised only in the sense that it is protoplasmic" (p. 314).

The comparison of meaning to life suggests two questions: (1) whether our inquiry is after all merely a question of Definition, and (2) whether a conception like Meaning can be defined at all. But the very fact of any doubt as to the possibility of defining terms which stand for unique or ultimate (primary) ideas or any significant or *sense-ful* words at all, at once reduces the appeal to definition to a secondary place

¹ *The Foundations of Belief.*

² *Mental Evolution in Man.*

among possible solutions of our problem. There is perhaps no greater snare, when we begin to realise the chaos in which word-sense lies and to seek a remedy, than the easy and obvious one of definition. Define, define, we cry, and then all will be easy.

But surely we forget that in the first place, this is often precisely the most impossible thing to do; as a fixed meaning, the same for all, unaffected by context of any kind, applies only, if at all, to a small proportion of ordinary words: and secondly, that to define every word which needs it would at once render all important works simply unreadable. They would be so cumbered with definitions or with pleas for, and justifications of, proposed definitions, or with protests against certain received definitions, that the book itself would disappear, while the definitions would provoke challenge on every side, and except in a few cases gain no universal assent, and thus advance us no further. Definition, though essential on its own ground (which again may be variously defined) would tend, if exalted into a panacea, to hinder the evolution of the most precious quality of language,—that power of growth and adaptation by which even now it reflects changes in the psychological atmosphere, and utilises these to purify and enrich the treasures of thought and imagination. But even if this were not so, the main problems not merely of sense but of significance—in short of ‘sensifics,’—must have been solved before we could arrive at really authoritative definitions. Meanwhile the search for these must always itself have valuable uses. As Prof. H. Sidgwick says, there is often more profit in seeking than in finding definitions.

Prof. Minto¹ tells us that “words have little meaning for us; are mere vehicles of thin preconceptions, raw prejudices” (p. 88). The remedy, he thinks, is the verification of meaning. We must fix and readjust. Surely that is beginning at the wrong end? We want first to rouse a general ‘sense’ of what the *value* of language, whether in the direct ‘sense’ or as applied to all that ‘speaks’ to us,—Nature, Art, &c.—may become to us if we will: of how much it may convey and suggest to us if we only master its ‘meaning’ methods. The varying character of language of which we so complain, the changing complexities of its suggestiveness and its implicative flexibilities, are not in themselves evils: even its ‘ambiguity’ is in a certain sense a glory which it shares with all the higher organisms: at this moment the very richness of this living suggestiveness is the cause of strenuous biological discussion and even controversy on a central principle.

¹ *Logic: Induction and Deduction.*

Organic development tends in proportion to its complexity to suggest more than one inference, and in that case to have more than one possible meaning for the observer. And thought cannot be poorer than life, so that its expression must needs be capable of more than one interpretation. Only let us recognise this and act upon it, and we shall cease to crave or strive for the fatal gift of final and mechanical precision of outline, or to protest against the kind of 'vagueness' which belongs both to life and to the horizons of the world in which we know it. We shall rather seek to be less 'vague' in another sense: to know more clearly how things really are in this matter: to allow more intelligibly for the halos or penumbras and for the atmospheric refractions which surround the symbols of living thought and actively growing mind. Ours is not a dead world without atmosphere in which all outline is clear cut and hard: earth's outlines melt and vary, shift and disappear, are magnified, contracted, veiled, by a thousand changing conditions. So with the 'world' of experience and its expression. We are too apt to over-estimate the value of mere precision in language and even in thought; though for some purposes, as *e.g.* diplomacy, it may be very great. As Renan himself, that master of lucidity, says:

"The clearness and tact exacted by the French, which I am bound to confess compel one to say only part of what one thinks, and are damaging to depth of thought, seemed to me a tyranny. The French only care to express what is clear, whereas it happens that the most important processes, those that relate to transformations of life, are not clear; one only perceives them in a kind of half light."

This is suggestive witness. And when Mr Balfour¹ urges upon us the power of authority to produce "psychological 'atmospheres' or 'climates' favourable to the life of certain modes of belief, unfavourable, and even fatal, to the life of others" (p. 206): when he says that their range and the intensity and quality of their influence may vary infinitely, but that "their importance to the conduct of life, social and individual, cannot easily be overstated," he would do well, surely, to add a warning of their effect, not only upon Belief but upon the Meaning whether of conduct or of experience, or of the verbal expression and definition of either. For these 'climates' must powerfully affect and modify the 'significance' both of life and expression in act or word; while we are constantly tempted to ignore the fact at least in language, and to suppose that meaning is the same to all,—or ought to be so. It is well to be warned that "identity of statement does not

¹ *The Foundations of Belief.*

involve identity of belief" (p. 263); and that we are *not* entitled to assume "that when persons make the same assertions in good faith they mean the same thing." There is no precise or definite relation between language and belief; but Formal Logic and conventional usage, he complains, both assume the opposite, a constant relation between Symbol and 'thing symbolised'—that is, Symbolate. This is in fact "an artificial simplification of the facts" (p. 265).

"If in the sweat of our brow we can secure that inevitable differences of meaning do not vitiate the particular argument in hand, we have done all that logic requires, and all that lies in us to accomplish. Not only would more be impossible, but more would most certainly be undesirable. Incessant variation in the uses to which we put the same expression is absolutely necessary if the complexity of the Universe is, even in the most imperfect fashion, to find a response in thought. If terms were counters, each purporting always to represent the whole of one unalterable aspect of reality, language would become, not the servant of thought, nor even its ally, but its tyrant. The wealth of our ideas would be limited by the poverty of our vocabulary. Science could not flourish nor Literature exist. All play of mind, all variety, all development, would perish; and mankind would spend its energies, not in using words, but in endeavouring to define them" (pp. 266—7).

Truer words were never written. Yet if we say that when we have managed to secure the validity of a particular argument we have done all that can ever lie in us to accomplish, and that more would always be not only impossible but undesirable, surely this depends on what such 'more' was. Incessant variation, as we have seen, is indeed as vitally necessary in the world of expression as in the world of life. Here there is no question even of metaphor. But that variation may become infinitely more under control than it has ever been yet. To speak of our struggle with ambiguity under the metaphor "in the sweat of our brow" recalls the husbandry of the savage in contrast with the scientific developments of civilised agriculture. Truly the muscular effort and its result, and even the primitive spade and hoe and so on, survive but little changed. Yet how small a part they now play by comparison with the manual labour and the tools of the earliest days! Still greater of course is the difference in our weapons and in our means of transport. When we have sharpened the arrow or the hatchet and trained a service of human runners or even of swift animals, we have done all that is possible on that plane of development: but most assuredly we have not even begun, except so far as one phase insensibly succeeds another, the next stage in the long ascent of civilisation. By what right do we assume that Language is the one petrified, ossified, non-evolving function of humanity, doomed eternally to remain either clumsy and

rude, misleading, confusing, incongruous, inconsistent, or else narrowed and crushed into a mere mechanical notation like that of arithmetic? As well say that we must for ever be condemned in the matter of musical instruments to the alternative of a primitive bagpipe or horn and an elaborate barrel-organ. And if it be (rightly) objected that Language needs an organic rather than a mechanical analogy, let us remember the difference between the dexter finger of man and its humbler simian ancestors, or even between his eye and its primitive prototype in the mollusc.

"We are no more able to believe what other people believe than to feel what other people feel." We may put the word 'mean' here for the word believe: and that, even in the case of "friends attuned, so far as may be, to the same emotional key." The student of 'sensifics' at least may be grateful for Mr Balfour's plain statement that "this uniformity of conviction, which so many have striven to obtain for themselves, and to impose upon their fellows, is an unsubstantial phantasm, born of a confusion between language and the thought which language so imperfectly expresses. In this world, at least, we are doomed to differ even in the cases where we most agree" (p. 276).

At all events, if such 'uniformity of conviction' were ever attained it would mean the 'death' of all that makes conviction valuable. There are assuredly "differences where we most agree" and also "agreements where we most differ." Yet there is no doom in the matter except that which we pronounce upon ourselves. If for 'uniformity' we substitute intelligent sympathy and a consensus which has learned to understand its own conditions: if instead of a clumsy make-shift or a rigidly fixed and invariable mechanical action, we start from the idea of a delicately flexible organic adjustment, then our 'doom' turns into our hope and will issue in our rich reward.

We are not tied down to the action of Natural Selection only, for voluntary action tells here also: and the 'characters' that language acquires may certainly be 'transmitted' and to some extent deliberately bequeathed. Only first let us learn more about sense as the paramount value of Language, and thus about the true conditions of its growing significance. If the meaning—here equivalent to content—of such propositions as 'Cæsar is dead,' 'Stealing is wrong,' or 'God exists' "could be exhausted by one generation, they would be false for the next. It is because they can be charged with a richer and richer content as our knowledge slowly grows to a fuller harmony with the Infinite Reality, that they may be counted

among the most precious of our inalienable possessions" (p. 278).

And why should not Language itself be charged with a richer and richer content as we realise more clearly what it may do for us? After giving us a typical example of "all that is most lucid and most certain" (p. 281), we are warned that its purport "is clear only till it is examined, is certain only till it is questioned." It serves us for working purposes, but that is all. Yet even so its credentials are better than any 'Foundations' could be, as they vindicate themselves by results. The working test is pre-eminently that which applies to language.

When we see the beginnings of an appreciable diminution of mutual misunderstanding and controversy, together with a still greater increase of power to express and power to distinguish, to discriminate, to combine, to co-ordinate the wealth of experience: when we begin to acquire methods of interpretation enabling our "most lucid and most certain" judgments to bear the closest examination and question and to become the clearer for the process, we shall not need to trouble about the 'foundations' of what will thus more than vindicate itself. It will be enough to have diminished the present enormous and grievous waste of expression-power and to have raised language at least to the level of the nervous system to which it belongs, in its power of adaptive response to excitation.

Once let general attention be directed to the practical mischief—the waste and loss, the muddle and misery—caused or fostered by inherited habits of language, and the universal demand for economy of means and a 'way out' of deadlocks will come into play and soon make remedy possible. Indeed in these days of 'enterprising journalism' the danger may soon become one of going too far and too fast. But we are a long way from this yet. Most of us are content to remain on what might be called a non-volitional level of speech, checking rather than fostering the adaptive power which has given us all that makes language worth having—its beauty and fitness as well as its symbolical character. As it is, the growth-force is supinely allowed to spend itself in sporadic and simply wayward outbursts, mere play for the relief of superfluous organic energy and impulse: there is no deliberate or recognised system of directing these to intellectually useful ends. We practically assume that language must be as far as possible stereotyped, and that the only exceptions or alternatives are the casual innovations dictated to us by the man in the street, who has never been told that 'meaning' is of the smallest consequence, and airily destroys even for scholars valuable distinctions and associations while his supposed teachers look helplessly on, as

in the case, *e.g.* of 'phenomenal.' Though even here, changes apparently erratic and made purely at random may have a distinct psychological value and better reasons than we or their maker quite realise.

And if we sorely need a heightened sensibility to the possibilities and dangers of significance (with all its implications) we equally need it in the case of analogy. This however is a subject so large as well as so important from the point of view of this Paper that even to sketch it would demand a whole essay. The study of analogy, metaphor, simile and illustration from the point of view now suggested, is of vital importance not only for Logic and Psychology but also for Science and Philosophy. So indeed is the whole question of language as raised by 'sensifics'; but this again for want of space cannot now be discussed.

Both scientific men and philosophers complain more loudly every day (as I have a mass of evidence to show) of the extent to which they suffer from the present chaotic state of things. The truth is that just as we are trained to be familiar with 'foreign' languages, so we ought to be trained to be familiar with new dialects in expression, whether these were direct as in terminology, or indirect as in graphic or other aids to representation. And let us not object that this would be an enormous additional tax on memories already overburdened. The truth is that we need far greater skill in swiftly discerning the complexities of sense: in the art of seizing at a glance the point, the gist, the whole trend of whatever is said or written, to put it in a nut-shell if we choose: that we ought to be able to 'place' it, to translate it, to 'enter into' it, to assimilate it—that is, to transform it into living tissue of our own. And we ought besides to be imbued, to be saturated with the 'sense' of the moral obliquity of giving each other darkness when we might be giving light.

If we admit with Dr Ward¹ that "philosophy has no nomenclature and no terminology," that "every giant and every pigmy states and misstates and restates as much as he will"; that "even babes and sucklings rush abroad brandishing the Infinite and the Absolute with infinite ignorance and absolute conceit," we can hardly deny the moral as well as the intellectual obligation to do our utmost in any way that seems feasible to end such a disastrous anomaly. The labour of fresh inquiry could not fail to be amply repaid. The results of this would be much more than literary. On the one hand it is a question of increased clearness and freedom in treating difficult or

¹ *Mind*, Vol. xv. No. 58, p. 226.

obscure subjects, increased power of propounding, and also of adequately criticising, new philosophical ideas: on the other many a fallacy or myth owes its survival in great measure to a dim general suspicion that the real gist of it has not been touched by adverse criticism. Popularise 'sensifics' and the faddists would have a hard time of it; unless indeed their 'fad' only required re-stating, limiting, guarding, in order to contribute some useful item of additional knowledge or some illuminative principle of thought. If more precise definition of the methods by which we might hope for a really new mental start is demanded, it must be answered that to attempt a premature formulation of these would be to court defeat; would in fact be fatal. Such an explanation or such a programme must be the outcome, not the preliminary, of the inquiry hoped for. First let us arouse a really active interest in the subject among those who are intellectually in touch with the rising generation and who are the virtual if sometimes the unrecognised leaders in all questions of thought. Then let us definitely examine the feasibility of an education avowedly starting from and centering round the principle of 'significs' or 'sensifics.'

If we are again tempted to object that this is too abstruse a subject for any but advanced students, we must remember that using the words in the wide sense which here alone applies and is called for, the first mental lesson which nature teaches the infant is precisely this. She surrounds him with stimuli and excitations: she prompts him to interpret these as best he may, and even to revise his translations under the pressure of pain and discomfort. And she leaves him no peace till he has learnt himself also to be significant, to 'convey meaning' and suggest 'sense' as unmistakeably as possible, first by cries and gestures, then by imitative articulate speech. We have only to take up her curriculum and carry it on, as in fact we do in the case of reading, writing, arithmetic, &c. If only by the impulse and habit of imitation, consensus in language is soon assured to the early stages of the growing intelligence, and consensus is the one means by which we may hope to secure it on the highest intellectual plane. Communication is now so easy among the intellectual leaders of men that there ought to be no difficulty in obtaining it when its enormous advantages are realised. We have already specific studies of acknowledged value under names like Hermeneutics, Orthology, and Exegesis. Moreover, although philologists complain that Sematology "the science of meanings," and Semantics (Bréal, *sémantique*), "the science of change of meanings" have hardly yet been touched, the importance of these and of the psychological side of language

generally is rapidly coming into greater prominence. And as foreign scholars themselves admit the special fitness of our language for studies of this kind, may we not hope that before long a start may be made by English writers and teachers in the direction of a more definite and combined effort than has yet been made, to promote the development of the expressive and discriminative powers of language, and to give the study of its main value, 'sense' or 'meaning' a more prominent place in mental training?

Psychology itself has hardly begun to take or to define explicitly its true place in schemes of general training. But it is gradually, however obscurely, making itself felt as a really potent factor in these. And as questions of 'sensifics' emerge from their present chaos, they too must suggest important changes in educative method.

The subject must however be left here, with one personal word added. For while this Article deals with virtually new and untrodden ground, there are only the old modes of language for expressing it, and moreover, the writer was never trained either to 'mean' intellectually well, or to interpret—or sensify—adequately and accurately. The subject manifestly needs analytic and synthetic powers of the highest order; for while 'sense' is 'common' to the whole mental range, it is so in various ways, and thus is peculiarly difficult to deal with. At best, then, this sketch can but serve as the barest introduction to what seems worthy of ampler treatment by more capable hands. May any over emphasis or exaggeration in the foregoing pages be condoned, written as they were in the hope of drawing attention to the importance of an untried investigation, and with no prejudgment of questions and issues as yet only indicated or implied. If such inquiry and consequent discussion follow, the first object of the Article will be attained, whatever the result may be. As to ultimate bearings and final developments; if, as things are, it were possible definitely to map these out, the investigation asked for would by this very achievement, have proved itself to be superfluous.

SUMMARY OF PART I.

Although the disadvantages and dangers arising from the present failure of language to express more than roughly what is termed Meaning or Sense are generally recognised, no systematic attempt to attack these at their root has as yet been made. Neither the process of interpretation nor the conception of Meaning have so far received adequate treatment. This

leads to the loss of distinctions valuable for thought, and to a low average of interpreting power. Attention is here called to (1) the neglect, especially in education, of any careful study of the conditions of meaning and its interpretation; and (2) the advantages which must accrue from such study.

Much is lost by the present dearth of means of expression and of training in their use. There is not even a word to express what happens when a given excitation suggests something other than itself, thus becoming a 'sign' and acquiring 'sense.' The word 'sensify' is proposed for this. Works on science and philosophy and especially on logic and psychology supply ample witness—both conscious and unconscious—to the need for a special study of meaning, which might be called *Sensifics*, as no term already in use covers enough ground.

SUMMARY OF PART II.

Such a study so far from being impossible seems indicated and called for on every side, and might be made not only practical but attractive even to the youngest child. At present language betrays, largely from the absence of such training, a disastrous lack of power to adapt itself to the growing needs of experience. But this power would soon be generally acquired as the result of the training here suggested, and would even to a certain extent follow a general awakening to the importance of the question.

Definition, though useful in its own sphere, must not be regarded as a solution of the difficulty. Ambiguity is an inherent characteristic of language as of other forms of organic function. Thought may suffer from a too mechanical precision in speech. Meaning is sensitive to psychological 'climate.' Both philosophers and men of science complain bitterly of the evils arising from an inadequate nomenclature and terminology. We all alike, in fact, suffer and lose by this, and by the endless disputation which it entails. It rests with education to initiate the needed 'fresh start.' It is incumbent upon English teachers and thinkers to lead the way, since our language is admitted even by foreigners to have peculiar facilities for inquiries and studies of this kind. Meanwhile it will be something to realise at once more clearly some potent causes of present obscurity and confusion, and the directions in which we may hope for efficient practical remedy.

IV.—CHARACTER AND THE EMOTIONS.

BY ALEXANDER F. SHAND.

I.

THE METHOD AND PROBLEM OF ETHOLOGY.

A MAN'S character is by popular thought distinguished from his intelligence; as if it were contained in his feelings and will. Such a one, we say, has a fine intellect but a weak character. Sometimes again it means the personal force that is in a man: some are spoken of as having no character. We can use the word neither in this one-sided, nor in this restricted sense. We can maintain no preferential attitude to the feelings and will over the intelligence. For character is both revealed in the intellect, and partly formed by it,—by its quality and habits of thought,—in its cultivation, neglect, and abuse. "The character of a person," says M. Paulhan, "is in sum that which characterises him, that which makes him himself, not another¹." It therefore includes the whole mind of man in feelings of pleasure and pain, in thought and volition; and all three elements contribute to its formation.

How then is Ethology as the science of character distinguishable from general psychology? The problem of psychology is on the one hand to analyse all the phases of mental life and on the other to trace their development in the race and in the individual. It has to consider how the infant-mind develops into the child-mind: what may be called the psychology of the stages of human life is a legitimate portion of its province, though little has been attempted in it;—the several characters which belong to infancy, childhood, puberty, youth, maturity, and old age, and the process by which the one is the outcome of the other. Psychology is then a general ethology of human nature, and ethology is necessarily a psychological science. But the one is wider than the other, and the relation between them

¹ *Les caractères*, p. 7.

that of a general to a special and comparative science. Human nature is, as it is said, at bottom identical, not merely in its cognitive and conative functions, but in its emotions and sentiments as well, in its feelings of pleasure and pain generally. It is this identical human nature which general psychology investigates. But general psychology does not analyse the different types of human beings, it does not attempt to classify these, it does not consider the process of their development, of their interaction, of their transformations. Once we begin to reflect with scientific method on the differential mind or character of men, we pass from general psychology to that special branch of it which Mill named Ethology.

Comparative psychology in its broadest sense may be said to consider not merely the differences between men and lower types of mental life, and the differences in mental development in the animal kingdom, but also the typical differences of human beings as such. Ethology is then a branch of comparative psychology.

This view of the relation of Ethology to the general science of mind is in essential agreement with the first account ever I believe given of their relation by the man who projected and named the new science. In the chapter on Ethology in his *Principles of Logic*, Mill tells us that the science "is a system of corollaries from Psychology¹," and that while Psychology considers "the elementary laws of mind," Ethology will have to determine "the kind of character produced, in conformity to those general laws, by any set of circumstances, physical and moral²." In other words, Ethology will consider, not the universal character of men, but the different types of character which are produced, in part at least, by what we name circumstances. But I think that Mill to some extent inverted the problem of the new science. In many cases, we cannot start from circumstances and deduce the kind of character which would be produced by them. On the contrary we have to consider first what the type of character is before we can deduce the effects of those circumstances. The differences of sex, the differences between individuals, the stage of life to which they have advanced, have so decisive an influence that the same set of circumstances "physical or moral" have different and often opposite effects.

What excites anger in one man will produce fear in another, what stirs desire in one will leave another indifferent or arouse aversion, what makes a man indignant will often make a woman grieve.

But in another direction, the influence of circumstances

¹ Vol. II. p. 453.

² *Ibid.* p. 449.

may perhaps be calculated apart from the individual type. We have to consider their influence both individually and their cumulative effect as a class. In the latter case, we do not consider one moment in a man's life, and how he is modified at that moment; but we take his life as a whole, or some considerable portion of it, and endeavour to trace the cumulative effect of the class of circumstances which have been predominant. Over and above the difference in a man's experience, there is a deep and persistent sameness—a rhythm of repeated events which, by slow and imperceptible accretions, moulds the character. Some men lead a calm, others an agitated life: some a monotonous, others a varied life: some are habitually unlucky, have been, at every turn, thwarted by their destiny; others have found circumstances favourable to them. And if we take portions of life instead of the whole, we find through the variety a persistent sameness of experience, which leaves its mark on men and enables us to classify them—the difference between good and bad education, the contrasts of character in the different professions, the lawyer, the priest, the soldier, the schoolmaster presenting distinct types. And wherever we are dealing with the cumulative effect of a class of experiences it may be possible to calculate their universal influence apart from their particular influence on individual types.

With regard to the method of the science, Mill regarded it, in distinction from psychology, as “altogether deductive¹.” In this opinion we must judge him to have been mistaken. As in the general, so in the comparative science, the analytical method is of the first importance. We cannot accurately deduce the modifications which a type of character undergoes in particular circumstances, unless we make at the outset a thorough analysis of the type. The finer our discrimination of its components, the more precise will be our deduction. But Mill has himself given the corrective to his exclusive insistence on the deductive method by his recognition of the value of those empirical generalisations concerning character which are stored in literature. And this “wisdom of life” we may derive as much from our own observation and thought as from books. The science will then be in part inductive; and we may either start from types of character which have been reached by this method, and then consider the psychical connexion of those qualities which have been empirically found to coexist: or we may start from some central and type-forming quality, and endeavour to deduce its psychical effects. For as Goëthe remarked², “There is in every character

¹ *Logic*, vol. II. p. 450.

² *Conversations with Eckermann*, p. 69.

a certain necessity, a sequence, which together with this or that leading feature, causes secondary features."—Or lastly, without binding ourselves to either method, we may adopt that which in the situation affords the best promise of success.

With regard to the important question of verification, Mill remarks that "as in every other deductive science, verification *à posteriori* must proceed *pari passu* with deduction *à priori*!" But if we take any type the several qualities of which have been found empirically to coexist, it is as true to say that the deduction of the same type from one or more central qualities is as much a verification of the empirical type, as that the latter affords a verification of the *à priori*. We do not know among how many of the qualities of the empirical type there is a real psychical connexion, under what conditions they invariably coexist, what chance coincidence there may be among them, how far there may have been looseness and confusion in the observations: and the psychological deduction may deny the connexion of some of the qualities while it verifies that of others. And it may discover new qualities which popular observation, always more or less fragmentary, has overlooked. Both methods will then to some extent supplement one another's deficiencies, and furnish some verification of the truth which each contains.

But a great obstacle stands in the way of any high degree of exactness in the new science. Psychometry has not yet advanced far enough to enable us to measure the strength of the various tendencies of character. Yet, putting aside the different objects of men's pursuit, we may say that all the differences of individual minds resolve themselves into differences of degree among the same identical qualities,—differences in the development and organisation of some, quantitative differences in the strength, intensity, persistence of others, differences in the degree of quickness of the mental processes: and in the construction of our types we are forced into loose assertions, that they have much or little, more or less, a higher or a lower degree, of a quality common to all men. The recent French works on the subject all labour under this defect; and we can only lessen it by throwing our conclusions into the form, that in proportion to the degree of the quality will be the truth of the conclusions deduced from it. If we could experimentally excite any desire or tendency in a human being, and, as has already been done with some classes of sensation, measure its relative strength, we might then hope to construct an exact instead of an inexact science.

¹ *Logic*, p. 455.

Ethology is then in the same position as the moral sciences in general; but like them it can make a beginning. In the first place much may be done, and has already been done, in the way of analysis and classification¹. We have to discover a principle for the classification of the leading types of character as they are found empirically to exist or are embodied in great works of literature, to test their psychological coherence, and by degrees to attach to them subsidiary classes dealing with more specialised and particular tendencies. But human beings are not petrified types, nor are they ever the mere embodiment of a single one. And we pass beyond what may be called the statical problem of the science when we consider the interaction of different types in the same individual, and the changes which overtake them in the passage through the different stages and situations of life. This, the dynamical problem of the science, is far the most difficult, and the French works to which I have referred have scarcely touched upon it. But in the first part of his treatise, M. Paulhan has shown in a masterly way how all characters may be classified according to the degree in which "systematic association" of their different tendencies is developed,—how they may be regarded on the one hand as rising out of a relative isolation of their impulses to higher degrees of organisation, or on the other as relapsing from perfect harmony to strife and anarchy.

Now in what precise sense are we to use the term "type"? A psychological type, we may say, is not the personification of an abstract quality, such as we often find among the characters of Theophrastus, but a complex of qualities possessing an inner psychical connexion. And these qualities must not be accidentally connected by the mere fact of coexistence. They must be such that given one the character of the rest follow as secondary results of this primary quality. Where, then, we find in any empirical type that the various qualities have different centres of attachment and are not all systematically connected with one, we have to say that it is the case, and the normal case, of a plurality of types in the same individual. This is the difference between the empirical types from which we start and the genuine psychological types into which we resolve them: the one will often be, to some extent, an accidental assemblage of qualities, the others will have always a systematic connexion.

I am here restricting the use of the word more than M. Paulhan has done. In the second part of his work, which deals with types produced by the predominance of a single tendency, while he has analysed them with fine discrimination

¹ See especially M. Paulhan's *Les caractères*; also B. Perez' *Le caractère de l'enfant à l'homme*, and A. Fouillée's *Temperament et caractère*.

and a wide knowledge of life, he has left them standing as so many isolated particulars, so many petrified abstractions, without attempting to deduce their secondary effects. And I have felt the justness of M. Fouillée's criticism upon this part of the work that it is really an analysis and classification of the passions and sentiments, not of genuine types. A single isolated sentiment is a psychological, as well as a practical impossibility. A dominant tendency affects all sides of the character, its outcome is a type, it cannot remain a sentiment. It forms a quality and habits of thought of its own; it organises other sentiments as subsidiary to itself; it leaves its mark on the volition and issues in a characteristic conduct; while, at the same time, it inhibits other qualities of thought, feeling, and conduct, which either are opposed to it or in no way further its interests. There is then no object in using the term 'type' to express an isolated sentiment; and a 'type' will mean always a group of qualities either empirically found to coexist or psychologically deducible from a central quality.

We have seen that a cardinal problem of the science of character is to construct a classification of the various sentiments, emotions, and appetites, or since these may all be regarded as 'tendencies,' to construct a classification of tendencies. Without such a classification we could not proceed in any orderly way in the presentation of the various types. We should have to take them at haphazard as they were suggested. Any systematic treatment of them would be impossible; and everywhere we should be apt to overlook important varieties.

But all the types of character are not due to the diffused effects of concrete tendencies. As M. Paulhan has seen, there is a hierarchy of types which is the outcome of the degree to which "systematic association" is carried. But beside this important difference between human beings in the mere form of their character, there are other cardinal differences which like it are independent of the particular sentiments, desires, and interests which may be found in a man. There is in the first place the degree of rapidity or slowness of the mental processes. Everyone is struck by this difference between one man and another. It is an empirical fact that we have to start from, and is found in conjunction with other qualities which constitute strongly contrasted empirical types. They are familiar to us under the popular titles of the Nervous and Phlegmatic Temperaments. The second important difference is that between what is popularly spoken of as the depth of one man's sentiments and the superficiality of another's, what we should call, in psychological language, a difference in the relative persistence of tendencies. How obvious again is this difference, shown

perhaps in its most marked form in the contrast between the mutable character of the child and the relative consistency of the man; but also reappearing among individuals, and between the characters of savage and civilized peoples. Any man of some imagination and experience of life can see rising before him two empirical types in marked contrast with one another, connected with these fundamental differences. Lastly there is the difference in the intensity of the feelings of pleasure and pain. We must put aside those feelings of pain which are connected with injury to the organism or which are the result of organic disease or functional disturbance. We have only to consider pleasures or pains connected with what we call sentiments, passions, or emotions. Now it is a fact of experience that some individuals and perhaps certain peoples, as for example the southern Italian, live at a white heat of feeling, that others by contrast are cold and impassive, and that others again are apathetic and indifferent. This difference of intensity is also exemplified in the characters of the child and the man: the eager and ardent feelings of a bright child, the intense hopes, the keen disappointments, contrasted with those blunted sensibilities to which most men come in middle life. This ardent temperament, as it is popularly called, seems also to be named the Bilious—by those who are fond of classifying men according to their complexion,—when it is found coexisting with black hair and eyes and an olive or sallow skin.

Another general difference between men is the difference shown in the strength of their tendencies. But it is, in greater part, derived from those differences which we have already considered. Thus, in proportion as an emotion is intense up to a certain point, is its present strength to control thought or action increased; its indirect or after-strength, in proportion as it is persistent; in proportion as it is highly organised, is supported by other sentiments and has a compact body of systematised thought connected with it, in that proportion is both its present and future strength increased: and its total strength is derived from these factors in conjunction with the force of habit.

Now with regard to all these most general differences between men—degree of organisation of character, rapidity of mental process, the relative persistence and intensity of the feelings,—their meaning when we merely recognise and accept them as empirical facts is quite ambiguous; and what we have first to do is to render it precise. For instance we do not mean that a man who discovers a superior quickness of apprehension and rapidity of thought has the same rapidity at all times, whatever the subject-matter of thought, whether

or not he is accustomed or suited to it. And a man whose sentiments are superficial does not show the same degree of inconstancy in all of them. Again, many men who are quick in their own field of research, often because of the fine organisation of their attention, are slow to apprehend what is outside. All these cardinal differences have to be carefully analysed, before they are ready for scientific treatment. We have next to deduce the type of character which is produced by these general differences, or, if we prefer to take the problem on the opposite side, to consider the psychological connexion of the qualities of the empirical types connected with them. And lastly we have to attempt the problem which Mill put first, to consider all the modifications which are produced in the type by the circumstances of life. But to carry this out systematically we require to classify them; and in the first place, what do Circumstances mean?

Popular thought is dominated by the dualism of Character and Circumstance. Circumstance is regarded as something external to Character and acting upon it from the outside. But the character of a man includes his thought and experience as well as his emotions and will. And a circumstance which is not experienced is from our point of view nothing at all. Only so far as it is experienced has it any influence upon character. For instance if we are in danger and know nothing of the fact, we are unaffected by it. Not until we know it, and interpret the fact to mean 'danger,' has it any ethical effect. It may have other effects, and our life may be sacrificed in consequence; but no change is produced in our character, unless it is transmitted through the form of an experience. And even the circumstance of good or ill health has only import for our science as change in the 'feeling-tone' of our organic sensations, producing those changes of mood which seem often so causeless.

But circumstance regarded as a part of experience is already a part of character. In that case what becomes of our antithesis between them? The antithesis must fall between one part of character and the remainder: experience on the one hand, and pleasure, pain, desire and volition on the other. But how can we carry through this distinction? A danger that we experience is not merely perceived, but our perception of it is qualified with pain or pleasure, and is itself a tendency, and in the broadest sense conation. Still if we are to take it as all this, the antithesis between circumstance and character loses its point. For it is precisely the alterations of pleasure and pain and the changes of conation, and even the kind of thought aroused which we have to trace to the specific circumstance: and if it

is to be interpreted as at once all of them, they cannot be regarded as its effects. The interesting question for us is, why the same circumstance objectively considered produces at one time and in one man pleasure, in another, pain, and leaves a third indifferent; why in the one its tendency is so inappreciable that it may be neglected, and in another so far-reaching that he is observed henceforth to be a changed character: and our method of answering the question lies in determining the man before attempting to consider how he is influenced by circumstance. We must then preserve in some sense the antithesis; and it will help us to effect this if we distinguish those two points of view which to confuse constitutes what has been called the Psychologist's Fallacy. A circumstance as it is interpreted by the type itself may be very different from what it is interpreted by us from the outside. What we name a temptation may be no temptation to a given individual. What then have we to consider? We have to consider how this fact for us which we give this name to, when it impinges on an individual as "a foreign something," will be interpreted by him and will modify him. We have first of all to give it its objective meaning before we can consider its subjective meaning for him. The antithesis is then between circumstance as we objectively think of it and name it and his specific character into which it is translated, in which it is transformed and upon which it works. We have to classify wealth and poverty, social position, power, success and failure, society and solitude, health and sickness, climate, family life, training and education, government, the different professions and modes of life, kindness, neglect and cruelty, according to their universal or objective meaning, in order that we may interpret their subjective meaning and influence when they form part of the character of an individual. And the individual himself may adopt both attitudes to his own experiences. 'These circumstances in which I am placed for which men envy me, which they regard as exceptional and fortunate, concerning which they would not listen to my complaint, are felt by me so differently that their meaning is transformed, their felicitic influence reversed, and I name them my *misfortune*.' And it is in this way that the individual must himself interpret the antithesis between his character and circumstance. He thinks of his circumstances objectively, as something outside himself, according to their universal name and meaning, this he takes as the cause, and their subjective meaning and influence as an effect due to his specific constitution and character.

Now we have to classify circumstances, in order that we may subject a type in an orderly way to their influence. With-

out this classification we should have to take circumstances at haphazard as they presented themselves. We should have no principle to guide us in our search for them, and consequently we should be more liable to overlook important varieties. And in this classification we must follow the objective and universal meaning of these circumstances, in order that we may trace the subjective meaning which they assume in particular types and all that is involved in this for the character.

Now supposing we could accomplish this statical part of the science,—that we obtained a classification both of those cardinal differences between men on which their typical characters depend, as well as of the circumstances which affect them; and that we were able to achieve the more difficult undertaking,—to deduce our types and to follow out the changes produced in them by circumstances, our knowledge of the type would then be more complete than our knowledge of any individual. In the best biographies, in the most finished character-studies in fiction, there is always an incompleteness. We have after all seen only one side of a man. How many other tendencies which we have never detected in him might have been evoked in different circumstances; and that set of the character which the general trend of his experience has imperceptibly formed would have been different or opposite in an altered mode of life.

Now in dealing with types instead of with individuals, we are not confined to the one-sided experiences of a single life. A type has many biographies: and with an essentially complete inventory of circumstance, we could subject it to the whole gamut of human experience. However distant such an ideal may seem, it is not inherently impossible, and by degrees we shall approximate to it.

And while the study of a type has this advantage over the study of an individual, it has another not less important. We can sometimes foresee the feeling and behaviour which a given experience will produce in one whom we know. But there are circumstances the influence of which we cannot foresee. How surprised we often are at the marriages which our friends make! Why should that woman have excited the passion of love in a man who had hitherto been insensible to feminine attractions? We may know in general terms that she must have some beauty or charm for him. But we sometimes cannot find the charm or the beauty. It lies hidden in his own experience of her, and in the meaning which his individual character gives to this experience. He can seldom point it out himself. This love-exciting experience is not to be detached or isolated; it suffuses all his thought and feeling in which she is concerned.

Thus, while we can understand the general experiences on which, in the abstract, the romantic passion depends, we cannot foresee, in many cases, the particular form which these must assume to arouse it in a given individual. But if we reduce both individuals and their circumstances to types, it should be far easier to deduce the influence of the latter, than when we are considering the perplexing interaction of individual minds and their actual experiences.

A great novelist has an instinctive perception of the feeling and conduct which will be produced in the characters he represents in the circumstances in which he places them. And if, dealing with far more complex characters and experiences than we have to consider in the first instance, he is able to reach conclusions that we accept as truth, our problem should be a much simpler one, had we not to combine his gift of intuitive perception with the power of psychological analysis and deduction.

But if they are in the right who hold that we have a spontaneity of will which cannot be calculated, because it freely chooses between alternatives without subjection to the stronger, then it must be admitted that, so far as this power is operative, it will in practice modify the truth of our conclusions. But as in the physical sciences we have to assume that no miracles occur, so here we must assume that there are no moral miracles, —none, at least, in the sense that a complete knowledge would not explain. And at the most acts of free choice are comparatively rare events in life. They do not occur in our common conative experiences. The situation must be complicated. There must be a conflict of alternatives; and thought must not be capable of reconciling them in a larger interest; nor of effecting a compromise between them; nor of procrastinating the choice. They must persist after thought as opposite incompatible tendencies; and, through their continual interaction, one of them must not be submerged. But both in conflict must wring from us that choice between them which is to decide the issue.

Now rare as any volitions must be which fulfil all these conditions, if they are as they are interpreted, they may have profound influence. But it would still be of importance to know what an individual or a type would become in any given conditions if it did not or could not exercise the supreme prerogative of the will.

In the remainder of the present article we shall be engaged in the field of general psychology. Before we classify the types of character we must know what the emotions and sentiments are, which, in their difference among different men, account for a

large class of these types. The psychology of the emotions, notwithstanding some recent advance, is still perhaps the most backward part of the science. It does not furnish us with the systematic theory we require, and, in the attempt to supply this, the truth of the statement will become more evident.

II.

THE ORGANISATION OF THE EMOTIONS IN THE SENTIMENTS.

The attempt to put order into the chaos of our feelings, to grasp or classify them under any intelligible principle not barren or useless, has not so far been attended with much success. The indefiniteness of many of our emotions, the way in which other feelings blend confusedly in them and in which they blend in more complex sentiments, the endless shades of difference between them, make their systematic treatment difficult. Appetites, sentiments, emotions, affections, passions, these terms occur to us as referring presumably to the subject-matter of our enquiry; but we have no clear idea how far these terms are synonymous, how far they mark important differences: nor indeed what are the important differences among our feelings, what is the productive principle on which they are to be classified. The psychology of the feelings can give us no answer to these questions: it has long remained the most unprofitable part of the science. As Prof. James remarks: "its sub-divisions are to a great extent either fictitious or unimportant and...its pretences to accuracy are a sham¹": nowhere, he adds, are we given "a central point of view, or a deductive or generative principle²."

M. Paulhan has advanced beyond this point. He regards the feelings from their conative side, and attempts to classify them as 'tendencies³'. His classification follows, not the quality or complexity of the feeling, but the nature of the object. They fall into a series according to the degree of its development. At the lowest stage we have those tendencies which refer to the organism or to any of its parts; next those which belong to the life of the mind, to imagination, thought, and sentiment; higher up those which systematise the life-interests of individuals, egoism, altruism; on the next plane, those which have a social object—love of family, class, country, etc.; and lastly those which have a supra-social object—love of perfection, truth, beauty, God.

¹ *Prin. of Psy.* vol. II. p. 448.

² *Ibid.*

³ See his classification on p. 115 of *Les caractères*.

But this classification tells us nothing of the character of the feelings themselves, about which we are in so much perplexity; and before we come to deal with it, we must consider the great and important distinctions among them, above all the distinction between the emotions and the sentiments which furnishes that "central point of view," or "generative principle of which we stand in need."

There are feelings of pleasure and pain which we localise in some part of the organism. They are commonly called bodily pains and pleasures. There are other feelings which are not localised in any object, but which in distinction are felt for an object,—affection for our friends, love of country, interest in business. The feeling of pleasure felt in the society of our friend is not localised in his body, as our own organic pleasures are localised in our own. The interest in our business is connected with and refers to this object, but is not felt and localised in the business premises and the events occurring in them. A feeling of pleasure or pain is either localised in our own body or it is localised nowhere: it cannot pass out of ourselves and be felt in another object: the feeling which belongs to that object, if it have any, belongs to it exclusively, and we can only think of or indirectly represent it.

Now the first class of feelings which are localised in our own body have no object in any proper sense of the term. They are not like our affections, feelings for an object, but feelings in an object. Before a pleasure or pain can have an object, it must first be incorporated in a perception or thought which necessarily has one, not as the object of that thought or perception, but as part of its subjective attitude to its object. My sentiment for my friend is not a mere feeling of pleasure. The feeling of pleasure is connected with a complex thought,—the thought of my friend,—and qualifies it as a pleasant thought. Both this thought and its 'feeling-tone' refer to and have as their object my friend. And as the thought is not localised, so neither is the feeling which qualifies it. But the bodily pain or pleasure is localised, and qualifies a percept or an image, not our perception or thought: it is always somewhere, while the sentiment is nowhere.

Now there is a mixed class of feelings which share in the character of both these classes. It includes all our appetites and emotions which have risen above the instinctive stage of a blind craving or impulse, and have attained to a certain intensity of feeling. Actual hunger, in the adult, is on the one hand a pain localised in the viscera and on the other arouses the desire for food. On the one hand it is a pain qualifying

organic sensation, on the other it is a pain and pleasure qualifying the thought of food,—a pleasure in the thought of the presence of food, a pain in the thought of its actual absence. In the one it is localised; in the other it is not. In the one it is an object; in the other it has an object. It is the same with our emotions which have reached a certain point of intensity. It is not that the pleasurable or painful organic sensations which we commonly experience in an emotion themselves constitute it, as Prof. James appears to maintain. For fear and anger qualify our thought-attitude to an object beside depressing or stimulating the functioning of our organs and producing painful or pleasurable organic sensations. I fear or am angry with you; my pain or pleasure suffuses and penetrates my thought of you, and is not all localised in my internal organs. And my emotion may become so faint that this bodily concomitant disappears. There might then be some dispute as to whether we should any longer call it an emotion, but about the fact that there are feelings which we do not localise there can be no dispute. Can we localise the moderate degree of hope which as cheerful people is the staple of our lives? If we can, that is not our hope of the favourable event. The essential factor of this is that an unlocalised thought must be qualified with a quite specific pleasure; the accidental factor is that this mental pleasure is accompanied with a change of organic sensation itself qualified as pleasant. Again, love may be raised to such an intensity of passion that it is distinctly accompanied with a bodily localisation; but normally the sentiment as shown in calm affection for our friends is purely mental and the state of our bodily sensations we do not connect with it.

I now come to the verbal question of the use and meaning of the terms. Joy, hope, despondency, regret, disappointment, are commonly called emotions, and we have to maintain that either, at every degree, they have a bodily localisation, or when they cease to have this accompaniment to cease to call them by the same name,—unless we reject this accompaniment as unessential. If we are no longer to call them emotions when they no longer have this, what other term can we apply? The term sentiment has another and more correct employment; and beside there is an important difference between them. We cannot speak of an affection of hope; and passion at once suggests the highest degree of intensity. We should call an emotion a passion when it has reached such a point of intensity that a person loses self-control: thus we speak of the passion of grief and the passion of rage. It therefore seems best to use the term 'emotion' to include joy, hope, despondency, and other

like feelings, however faint their intensity; and while they still remain emotions at their highest degree, this degree is more definitely expressed by the term 'passion.'

The terms sentiment, interest, and affection do not seem to mark any important difference. We speak of the sentiment of justice, truth, and the moral sentiments generally, of the sentiment of friendship; but of affection for our friends, rather than sentiment, and of interest in our health or business, rather than either: the difference turning upon what we are not considering at present, the different character of the object. We shall then use the term sentiment in a broad sense to include what with more propriety we call affections or interests: and we now turn to the distinction between this great and important class of the feelings and the emotions.

The difference between our emotions and sentiments lies in the different growth of their organisation. And while the latter are highly organised, the former may subsist at a stage of relative isolation and simplicity. But the emotions tend always to build themselves into more stable and complex feelings: and these are the sentiments, which in their turn become the centres of attachment of the organised emotions.

Now the sentiments and interests on the one hand and the organised emotions on the other form two complementary classes. Compare friendship, cruelty, hope, fear, gluttony, anger, amorousness, lust, envy, love of knowledge or art, regret, despondency, self-interest. Do not they perplex us because they are at cross purposes, and are grouped without any principle of classification? Some are qualities of action or conduct, as cruelty; others are sentiments, like friendship, love of knowledge or art, self-interest; others are appetites, as lust. Others again, as hope, fear, anger, envy, regret, despondency, are emotions. Some of the latter, as fear and anger, may occur in isolation, and not organised in a more complex feeling. Others, like hope, despondency, regret, disappointment, satisfaction, elation, envy, always imply some pre-formed sentiment to which they are attached: we cannot hope for an event in which we are not at the same time interested. The peculiar organisation into which all emotions are growing is one in which they are to occur as modes or phases in the life-history of the sentiments. They are in a sense adjectival and qualify a more stable feeling. Whereas the specific organisation of our sentiments,—affection for our friends, the home-sentiment, and every sentiment that we can use the term 'love' to express, as love of knowledge, art, goodness, love of comfort, and all our interests, as interest in our health, fortune and profession, interest in books, collections, self-interest,—these, so far from

being mere adjectives and qualifying other feelings, are the relatively stable centres to which the first attach themselves, the substantives of these adjectives, the complex wholes which contain in their possible life-history the entire gamut of the emotions.

In the love of an object or interest in it, there is pleasure in presence and desire in absence, hope or despondency in anticipation, fear in the expectation of its loss, injury, or destruction, surprise or astonishment in its unexpected changes, anger when the course of our interest is opposed or frustrated, elation when we triumph over obstacles, satisfaction or disappointment in attaining our desire, regret in the loss, injury, or destruction of the object, joy in its restoration or improvement, and admiration for its superior quality or excellence. And this series of emotions occurs, now in one order, now in another, in every sentiment of love or interest, when the appropriate conditions are present.

Now consider how these same emotions repeat themselves, often with opposite objects, in the life-history of every sentiment which we name dislike or hatred. There is pain instead of pleasure in the presence of the object, desire to be rid of it, to escape from its presence, except we can injure it or lower its quality, hope or despondency according to the chances of accomplishing this desire, elation or disappointment with success or failure, anger or fear when it is thrust upon us and persists, surprise when the unexpected occurs, regret or grief, not in its loss or injury, but in its presence and prosperous state.

We may perhaps say that the hatred of inanimate objects is rare, that this sentiment is reserved rather for human beings: but it is frequently met with in that lesser degree we name 'dislike.' We take dislike to places, to sounds, to sights, and even to names. The musician hates bad music, the man of taste, the architecture of our great towns, the vulgar decoration of the houses, and their 'Victorian furniture.' In our dislike to a place, desire is limited to escaping from it, and by disparagement to lower it in the estimation of others, hope is excited by the prospect of living elsewhere, despondency at the prospect of remaining. And this may arouse in us an impotent rage: and at the thought that years, perhaps a lifetime, may be spent and spoilt in the hated locality we shudder and fear takes us. Consider too how school-boys deface the lesson-books which they hate, and how they would like if they dared to destroy them.

And these same emotions common to our love of whatever object become complicated with new differentiations in the love

or hatred of a human being. Pleasure in the presence of the object, desire for it in absence, for the preservation of its existence, for its superior quality, anger or fear when it is threatened, hope, admiration, disappointment, regret, recur, and constitute the love of the object, of its well-being; but the specific emotion of sympathy is differentiated. The nearest approach to this in our love of inanimate things, or those great constructions of our thought, business, knowledge, art, morality, is the interest we take in the continuance of the object, in its improvement, or heightened quality, and, conversely, in the pain which any loss of quality, injury, or destruction occasions. Now if we supposed the object were self-conscious and took pleasure in its own continuance and improvement, and felt pain in its injury or lowered quality, there would then occur a sympathy or identical feeling excited in two conscious beings in reference to the same object. Thus where human beings are concerned, there necessarily arise coincidences of this sort which, multiplying in those common situations where danger or injury is present, develop the emotion of sympathy as a new component of the love of the object. And in the process of development, pity acquires a qualitative flavour distinguishing it from the pain felt in the injury or destruction of inanimate objects.

In the next place, the pleasure felt for the excellence or superiority of an object that we love, develops into the new emotions of respect and reverence: respect where there is a superior power or quality which fails to win admiration, reverence where this superior quality is recognised as moral. And both admiration and something of fear blend in this emotion and give to it a flavour and specific quality of its own.

Lastly consider how the regret or sorrow that we feel when we have injured any object that we are interested in or love, where human beings are concerned, and our action is not accidental but the outcome of anger, or the change from love to hatred, differentiates the new emotions of remorse and repentance. Repentance is no mere revival of this same universal sorrow or regret; it has acquired a character of its own with the blame that we pass on ourselves, the futile effort to recall and undo the past, the hope and desire and resolution to make the future different. And remorse too has a character of its own with the fear and even horror that blend with it, the regret for what has been done without the hope and resolution of repentance, but rather with a deep despondency or despair which sees no possible escape.

Passing from love to hatred, sympathy is replaced by

antipathy, when the object of the sentiment is a human being or one of the lower animals. Antipathy is not merely the universal pleasure in the injury or lowered quality of any object that we hate, not the universal pain in its continuance, advancement and prosperity, but with the blend of the represented pleasure and happiness of another with our own pain felt in his happiness, with his represented pain and misfortune and our own pleasure felt in his misfortune, with his represented desire and our own aversion for its satisfaction, with all his emotions awakening in ourselves a contrary emotion, there arise the new emotions of antipathy, of pleasure in pain and pain in pleasure, each with its own distinct quality. That ignoble pain that we feel in the prosperity, the superior quality, excellence, high station or power, of anyone that we hate, has something quite specific, and has obtained from mankind the name of Envy. It has its converse in the malicious joy in the degradation or downfall of the hated one and the fiendish delight which this sometimes assumes where the degradation is extreme.

Lastly consider how the common desire to injure or destroy any hated object becomes, where a human being is concerned by whom we have been injured, the peculiar emotion of revenge.

We have now to observe how the same universal emotions common to our love of whatever object reappear with further complications in the love of ourselves, in our self-interest, and produce still new differentiations.

The pleasure felt in the superiority of the object, the respect for it when it is a person, becomes in reference to self the specific emotion of pride, easily distinguishable in mere feeling from this disinterested pleasure. And admiration differentiates into another emotion as specific as pride where we take up a different attitude to ourselves. When we regard ourselves from the outside, from the point of view of a spectator, and admire any superiority or excellence that we seem to possess, this self-admiration has so distinct a flavour that the term pride wholly fails to express it and we name it vanity. This is the true distinction between them. It is not that vanity is attached, as it is sometimes said, to smaller and trivial points of superiority and pride to more important qualities, for a man may be as vain of his genius or of his great offices, as a woman of her beauty, and pride may attach itself as much to some useless physical dexterity, as to great talents or great wealth; but it is that over and above the qualitative difference of the emotions and their consequent difference of physical expression, though their objects may be the same in any two instances, they always think of them differently. When vanity is excited we always

regard ourselves indirectly and from the outside, as we should appear to a spectator, in terms of visual sensation. Hence the looking-glass is the emblem and symbol of vanity. But pride always thinks of itself subjectively and from the inside, without caring for the appearance of the thing. It does not embody the thought of itself in an image which must be regarded as if it were some other self.

Pride, though it is often, is not necessarily more independent in its self-judgment than vanity. A man's pride in himself ordinarily grows with the recognition that his superiority meets with from others; and some plain people are vain of a beauty or attraction which seems to obtain no corroboration from outside opinion. But from the fact that a vain man always considers the appearance of the thing it follows that he attaches more importance to this than to the reality. Hence the tendency of the vain man to become a boaster or braggadocio, and to lie for the sake of the appearance. While the proud man, priding himself on the reality and not on the appearance of possessing it, likes to be sure of the fact, and would by such a make-belief be humiliated by the consciousness that he did not possess it.

Two other distinctive emotions are developed from this common basis of pain in the inferiority of any object that we love, corresponding to the pleasure felt in its superiority. They are the opposites of pride and vanity. The pain in our own inferiority, regarded as an object of our own thought, not of the perception of any one else, has developed the specific quality that we name humiliation, the flavour of which we liken to a bitter taste. It is the opposite of pride and adopts the same attitude to its object. But when the inferiority is not thought of for itself, but from the point of view of its appearance to a spectator, it develops the specific emotion of shame. How certainly this attitude is taken up by the shame-faced person is shown by the instinctive effort to hide the face. Shame is then the direct opposite of vanity and assumes the same attitude to its object. It is usually connected with a quasi-moral inferiority, as with acts of indecency. On the other hand, any action which makes us appear foolish or ridiculous arouses the emotion when we are thinking of the appearance; while to the proud man, regarding his inferiority directly, mute rage at his humiliation. Why the emotion should be excited by any accidental exposure of the person may be explained by the fact that anything which shows what animals we are at once excites the ridicule or contempt of the spectator. For we are agreed to throw dust in one another's eyes, and conceal this unpleasant fact. Hence when that is exposed which is habitually kept hidden we publish

our inferiority, and shame, the opposite of vanity, is like it engrossed by the appearance of the thing, not by the thing itself. This is witnessed to by the fact that people do without shame in the dark, or when they cannot be seen, what they would blush to be seen doing. The act is the same in both cases, only its appearance is different.

Now the pleasure in superiority, the pain in inferiority are only differentiated into pride and humiliation, or vanity and shame, when the object of thought is oneself. They are always egoistic emotions. Even when we take a legitimate pride in our children or our friends, it is always because they are ours. If they were another's, we might respect or admire disinterestedly, but we could not have excited in us the specific emotion of pride. We may admire the greatness of our country, the talent of our children or friends, but when this emotion blends with pride, it is because we are thinking of self and relating others to ourselves.

Lastly the desire for our own superiority is called ambition, and, whether it adopts the attitude of pride or vanity, always has this reference to self. But, like pride, it may blend with more generous emotions, and attach itself to any object closely connected with us. In the ambition to promote the greatness of one's country, or to advance the welfare of mankind, self has contracted to an insignificant factor. Instead of including others in the microcosm of self, it includes self in the macrocosm of the world. Yet even, when the emotion of ambition is present, there is always the tacit condition that self is to be the agent in the great undertaking.

We have seen how, in the life-history of every sentiment, the same emotions repeat themselves under the appropriate conditions, that where the object of our love or hatred is self or others, and in some degree the lower animals, they are further complicated and develop new emotions: and that the fundamental distinction between the emotions on the one hand and the sentiments on the other, and the principle on which their organisation rests, is that the one are merely adjectival and attach themselves, or more correctly blend as temporary qualifications in those more complex and persistent feelings which they both serve to develop and into which they are absorbed; while the others are the substantival and persistent sentiments which include them, and which in each particular case suffuse with something of their own flavour the emotion which happens to be excited in them.

Those who still think according to the atomistic methods of the older psychologists will fall back upon their familiar argument that the sentiments, as they have been here interpreted, are

after all only the name of the group of emotions which are associated in them. The day is past when such an argument could persuade men. So far from the actual sentiment being the mere emotion which is actual, or any group of emotions that may be recalled in memory, it is always a development out of them and of the special pleasures and pains of sense, and never their "literal resuscitation, revival or reinstatement." For it is with the emotions as with the sensations of the palate, they cannot unite, and remain outside of one another unaffected by their union. When they combine their quality is changed, a new flavour is distinguished which is not merely the sum of the separate flavours which preceded it. And so when the sentiment is developed out of sensations of pleasure and pain and specific emotions, it has acquired out of the blending of so many experiences a flavour and a character of its own. Have not the love of good living, the love of honour, the love of a friend, the love of man for a woman, each one its own specific quality? When we recall our love, how many memories blend confusedly in it, how many hopes and disappointments which take no distinct shape, the ardent desires of the past, the triumph or failure, the angry passions, regret, remorse or shame; and these make the sentiment what it is, which in its turn suffuses the distinct memories and the actual emotions with its own flavour and fragrance.

Yet, though Love is always a Sentiment, we find it, in the different accounts of the emotions, classed among them. And what leads to this confusion is that when we use the term, Love, we commonly mean a feeling of considerable intensity. But as Emotion, in its popular use, also suggests a high degree of intensity, what more natural than to call love an emotion? We should not make this mistake with the term, Interest, though interest and love belong to the same class of feeling, because interest suggests a low degree of intensity. And with a low degree of intensity, there goes a loss of any appreciable "somatic resonance": and we think of the sentiment as a feeling of low degree¹. Hence if we had to decide between calling Interest an emotion or a sentiment, we should choose the latter. Now the terms, Sentiment and Emotion, are no doubt applied with great looseness in the popular use, and if we take the difference of intensity which is sometimes meant, and make that the ground of our distinction, we confuse the important difference, we emphasise that which is trivial. We must call love, hatred, fear, anger, hope, despondency, regret, emotions at one degree of intensity and sentiments at another. But popular use itself

¹ See, for instance, Prof. Ladd's distinction between the emotions and sentiments, *Psychology, Descriptive and Explanatory*, pp. 543-4.

suggests a better interpretation. When it calls the love of justice, truth, beauty, and goodness, sentiments, we are reminded of the higher development of their thought. And if we follow out their organisation on the side of feeling, we see that the sentiments are the ground of the organised emotions, the reason why we feel this or that emotion in these circumstances; that the difference of intensity is a wholly fallacious guide—that any sentiment may be raised to the intensity of a passion by the emotions which are excited in it without ceasing to be a sentiment, and that any emotion may sink to the lowest degree of feeling without by any possibility becoming a sentiment. And as regards the unorganised emotions these are distinguished from the sentiments by their relative simplicity, isolation, and independence, and by the function which they are destined to play whenever they become organised.

The sentiment, as interpreted from the outside, is the thought of an object, as a permanent thing or quality. While the emotion, where it has a thought, refers to some change or event, not to a permanent quality. As the relatively stable thought of the sentiment is modified, and becomes, for instance, the thought of this man whom I like as injured or insulted, or this thing which I like as broken or lost, so an emotion is excited and merged in the sentiment; and the emotion is to the sentiment as this change of thought is to the identity of thought on which it rests. And this identity of thought which refers to the same object with its feeling-tone and conative tendency, which persists through the emotional phases excited in it, is the sentiment.

III.

THE CLASSIFICATION OF THE FEELINGS.

We have come to recognise that Feelings may be classed according to the degree or character of their organisation. Some are relatively unorganised and isolated. This class may include pleasures and pains of special or organic sensation, all our appetites, and some of our emotions, on the other hand all of them may rise into the alternative class of the organised feelings. To which class any particular feeling belongs is determined by our answer to the question whether it is or is not assimilated by any performed sentiment. For instance we say that the child loves novelty; but this implies a confusion of our mental attitude with the child's. We should say that the child is pleased by new objects. The pleasure which he takes in them, the instinctive impulse to turn away from anything that

has grown familiar, is the germ of the love of novelty which he afterwards develops when he can distinguish the abstract quality from its concrete embodiment. Then the sentiment of novelty organises and assimilates the particular pleasure felt in new objects, and becomes complicated with a variety of emotions of which these isolated experiences could not become the vehicle. As has been remarked before it is only the more primitive and elementary emotions which can subsist at a stage of relative isolation. While anger, fear, surprise, admiration, and even sympathy, may occur before the varieties of love or hatred have grown out of them; hope, despondency, regret, disappointment, envy, revenge, jealousy, always imply a pre-formed interest in the object. Again, those specific emotions which are developed in our self-love,—pride, vanity, ambition, humiliation, shame,—seem to presuppose the thought of self and interest in self. I doubt whether they would be possible in early childhood before the conception of self had been formed. On the other hand sympathy may be evoked at the sight of suffering before an interest in the individual has arisen, or in our fellow-creatures generally.

The second class of the organised feelings contains the two sub-classes of the organised appetites, emotions, and specific pleasures and pains of sense, and, on the other hand, all the sentiments and interests. These classes with their subdivisions include all the varieties of feeling. The subdivision of the first class we have already seen, and the enumeration of all the emotions of the second class would not be difficult. I have not pretended to give a complete account of them, but it will now be easy to classify any one that has been overlooked in reference to its function in the sentiment; whereas before, with the perplexing mixture of qualities of conduct, sentiments, emotions, undiscriminated, and no principle for their distinction or classification at hand, we had a confused feeling of wandering about a pathless forest which could not be intelligibly surveyed from any point of view.

It is when we come to the subdivision of the third class—the sentiments and interests—that our difficulties recommence; and this part of our enquiry must be deferred. To enumerate them all would be impossible. They are as innumerable as the objects to which our sentiments are attached. We can only hope to subdivide this class into general sub-classes. But here what is to be the regulating principle, are we to be guided by the character of the objects or the character of the sentiments? Apart from their difference of degree, the only important difference that we have found between sentiments is in the content of their emotions which in the love or hatred of human

beings to one another develop new differentiations. But we have not yet remarked that the entire gamut of the emotions is actualised as a matter of fact in the life-history of but few sentiments. Experiences are ordinarily too monotonous for that; and the conditions on which their occurrence depends have not all been present in the life of an individual in reference to the same object. Hence the sentiment which is developed out of these emotions and pleasures and pains of the special senses will be different in any two cases owing to the different experiences which have formed it. Apart from its different intensities and strength of persistence, it will have also, however faintly, a qualitative flavour of its own. The loves of no two men are the same. The one may be suffused with joy and happiness; the other with sorrow and disappointment. And there is another important difference in their organisation. The sentiments organise within their complex systems, not merely the thought which subserves their ends, not merely the series of emotions which are excited in them, now blended together, now in succession, but also, and in different proportions, other and subsidiary sentiments. How many of the latter are contained in the conscience as subordinate to the interest felt for its supreme end,—love of justice, honour, beneficence and truth. But again in what degree has the supreme sentiment actually organised them, how many egoistic impulses escape from its control, how many quasi-moral sentiments refuse obedience to it, notably what men call honour; and the love of Truth will push its cold analysis even where the sense of decency, or affection, or reverence forbids it.

Other sentiments again are so contracted that they can find room for but few that are subordinate. And where they are dominant, as they cannot enrich the character by coordinating the many affections which a supreme sentiment must relate in a harmonious system, so these must be sacrificed and destroyed. Such is the old man's avarice which starves both himself and others.

V.—DISCUSSIONS.

SELF-KNOWLEDGE.

THE term self-sacrifice, as used by Green¹ in his argument against the Hedonists, contains an ambiguity which even he, strange to say, does not sufficiently observe, namely that the 'self' which is sacrificed is capable of being understood, according to the predisposition of the reader, in the higher or the lower sense. Of course what Green meant was the sacrifice of individualistic inclination for the sake of personal good, but in general the 'self' of which he writes is somewhat very different from 'inclination.' Again when defining Personality (which he does with avowed diffidence) as 'the quality in a subject of being consciously an object to itself' he involves himself in an analogous difficulty. His hesitation to offer this or any definition of self arose no doubt from his perceiving that the true self cannot be object. Dr Martineau, too, in his controversial chapter on Positivism and its prophet, A. Comte, shows but a feeble apprehension of the difficulty with which one has to contend when asserting the fact of self-knowledge. He asks², "Are we not continually *telling* our own thoughts and feelings and purposes? Then is it not ridiculous to assert that we *cannot know them*? And if we know them, it is assuredly not by outer testimony or any use of eyesight that we discern them, but by the inner vision of reflection. What then is the matter with this sort of apprehension? Are they not real *facts* that it shews us? &c. &c."

Arguing in this strain he seems to ignore the fundamental difference between self-knowledge and all other knowledge. The 'facts' referred to are 'real' enough, but they are facts of particular experience, what is vulgarly called 'inner' experience. Being facts of ordinary knowledge, objective events in time, they are not facts of self-knowledge. Knowledge of self is no more involved in the perception of pain or purpose than in the observation of a star. In short Dr Martineau attempts the impossible when he attempts the proof of self-knowledge by means of psychology. Plato³ and Aristotle had already distinguished various meanings of self;

¹ *Prolegomena to Ethics*.

² *Types of Ethical Theory*, II p. 6.

³ *Vide infra*.

and Aristotle¹ had pointed out the popular error of supposing that the morally unselfish man is one who cares nothing for himself. The man who 'sacrifices himself' in a noble cause is, according to Aristotle, in the highest and truest sense *φίλαυτος*: he acts for the sake of that in him which is best, that which is most himself; but his 'selfishness' is a blessing to his fellow men.

It is interesting to examine how the conception of self became progressively defined, and refined, in European philosophy. This process seems to have virtually begun with the enunciation of the famous *γνώθι σεαυτόν*; and accordingly it is worth while to trace the history and influence of the precept from the earliest records to St Augustine, from him to Descartes, and on to Kant and his successors. The following pages contain a summary of the information we derive from Plato as to the origin and meaning of these two words which, rightly understood, contain the germ of critical philosophy.

Of all moral precepts KNOW THYSELF is perhaps the most remarkable for a twofold and somewhat paradoxical reason. None has more deeply impressed the imagination, while none has been understood, or misunderstood, in a greater variety of ways. In moral and theoretical philosophy it would appear to have been the root of controversy and disappointment. A cynic might compare it to an apple of discord divinely thrown among thinking men: others might liken it to a prism which decomposes the seeming-simple light of common sense, but into rays for whose re-composition thinkers have ever found themselves strangely unprovided. From the time when, according to the tradition, this precept was first issued by Apollo, and engraved above the portals of his temple at Delphi, to the present time, it has been a sort of moral shibboleth. Received at first with reverence by all, and better known to the ancient Hellenic world than the inscription on St Peter's is known to Christendom, it was long venerated as worthy of its divine authorship. It was adopted by Socrates as the foundation of his practical creed; it furnished Seneca with consolation in the presence of death; it became to St Augustine a strong defence against scepticism: it continued to be, in mediaeval times, a theme on which moralists dwelt with seeming profit and real delight; and it was finally rejected by Hume and Comte, and contemptuously dismissed, as impracticable, by Mr Carlyle. Now it is hard to conclude that a precept which has for so many centuries fascinated the intelligence or imagination is itself unintelligible and commands what is impossible.

For the Hellenes it appears to have originated in the worship of Apollo. At all events its origin was distinctly religious. We read² in the *Protagoras* that the seven sages, Thales, Pittacus, Bias, Solon, Cleobulus, Myson, and Chilon, customarily expressing themselves in pregnant apophthegms, assembled with one consent at Delphi, and dedicated to Apollo in his temple the firstfruits of

¹ *Nic. Ethics*, ix. viii.

² Plato, *Protagoras*, 343.

their wisdom ; inscribing there two maxims 'now on the lips of all men,' viz. 'know thyself,' and 'nothing in excess.' In the *Charmides*¹ we have another reference to the tradition which ascribed the maxim to some of the Sages. But this tradition had, even for Socrates and Plato, no assured foundation : it had gained favour with the 'rationalists' of the time, but failed to displace the common belief that 'know thyself' was originally uttered or inspired by the god.

Stobaeus² aims at collecting the principal sources of information respecting the Delphic precept. This author quotes, among other writers, Porphyrius, whose words may be freely rendered as follows : "Whether Phemonoë or Phanothea, the daughter of Delphus, enounced this oracle : whether it be the dedicated offering of the Sages, or we must accept the statement of Clearchus that, when Chilo enquired of the god—what was best for man to learn ? the Pythian returned 'know thyself' as his answer ; or whether (as Aristotle says) the maxim stood inscribed in the temple before Chilon's time : whoever was its author—for this is matter of dispute—unquestionably its utterance was due either to the god himself or to his inspiration." From this we gather that all was uncertainty as to the origin of the celebrated saying. If Plato and his contemporaries had, as they really had, lost the clue to its source, it was not likely that their successors should be in this respect better off. Accordingly we must be content with what little knowledge of its origin we gain from the Platonic dialogues. But we know from them, and from a host of witnesses, one thing for certain, that this piece of counsel, know thyself, stood conspicuously engraven over the entrance of Apollo's temple at Delphi.

As regards its interpretation, it was accepted, apparently, at first in a purely ethical signification. Heraclitus, the earliest Greek philosopher whose remains contain any allusion to it, seems to have given it a moral import. In fragment 106 (Bywater) he says : "It behoves all men to know themselves and (? thereby) to exercise self-control." Thus γνῶθι σεαυτόν was for Heraclitus, as afterwards for Socrates, equivalent to σωφρόνει.

Its influence upon philosophy, however, did not become in any degree marked, until it awakened the reflection of Socrates. For his views of its meaning we must look to Xenophon and Plato.

In Xenophon³, Croesus tells how he had consulted Apollo at Delphi as to his family, and received advice from the oracle. He proceeds with the story thus :—"Sons were born to me, and therein Apollo's word was not false : but nought did these sons profit me. For one was dumb, and the other was cut off by death in the prime of manhood. Whereupon I sent again to ask the oracle what I should do to enable me to pass the remnant of my days most happily. He replied :—

'Know thyself, Croesus ; then happy wilt thou live and die.'

¹ 164, d.

² *Flor.* XXI. 26.

³ *Cyropaedia*, VII, 20—25.

"I rejoiced at hearing this, for I thought surely Apollo offers me happiness on the easiest terms. Other men, indeed, one might or might not know: but each must know himself." Croesus then goes on to describe how far he was mistaken, and the disasters which in consequence befel him. He engaged with enemies for whom he believed himself a match, because he did not really, as he had imagined, know himself; and the result was his defeat and captivity. He concludes by saying: "Now at length I do know myself, and have been righteously punished for the self-ignorance whereof in former time I was guilty." Thus for Croesus here, i.e. for Xenophon, to 'know oneself' meant 'to know how much, or little, one was able to do,' 'to know one's own power.' That in this Xenophon represents the teaching of Socrates is probable, and the more so because in the *Memorabilia*¹ he brings Socrates himself before the reader as thus interpreting the Delphic maxim. Conversing with Euthydemus, Socrates is there made to enquire if the latter had ever gone to Delphi and seen, written over the temples, the two words 'know thyself,' and if so, whether he had considered them seriously, and tried to understand them. Euthydemus replies that he had of course seen the words there, but had made no great effort to understand them, their meaning having seemed so manifest as to demand no such effort for its discernment. "If I did not know myself," he says, "what on earth should I know?" Socrates, as usual with him making the seeming-easy appear difficult, goes on to show that the fact is not as Euthydemus supposed; until the latter at length confesses that the maxim is one which demands the most serious attention, not only because of its importance but of its intrinsic difficulty. He asks Socrates to explain how he must begin to know himself, and is told that the maxim enjoins the knowledge of one's powers, as well as the discrimination between good and evil. Thus the interpretation given to it by Croesus is adopted and amplified. Here we in all probability have before us the interpretation placed upon 'know thyself' by the historical Socrates. But the Platonic Socrates pushed his enquiries deeper. For while the ethical bearing of the maxim is never quite lost sight of, it is connected with, or made to rest upon, a metaphysical exposition.

The first passage of Plato to which I shall refer for his view of the meaning of the oracle is in the *Philebus*², where Socrates declares unhappiness to be due to self-ignorance, 'the state antagonistic to that prescribed for men by the Delphic inscription.' We here learn that all who are ignorant of themselves exhibit this ignorance in one or other of three ways, i.e. as regards their minds, their bodies, or their estates. It is in the first respect that most men fail; ignorance of their minds being characteristic of the multitude, who for that reason are easily entangled in the meshes of false philosophy. 'This condition is one of utter wretchedness.'

¹ IV. 2.² p. 48.

Next I return to the *Charmides*¹, where Critias insists on the urgent necessity of self-knowledge, as the essential feature, or factor, of self-control. "This," he says, "is what the god at Delphi enjoins upon his worshippers in the words 'know thyself'; χαῖρε, the ordinary salutation which bids 'rejoice,' not being the best, as the god well knows, and shows by this inscription. Different in form as the two expressions—'have self-knowledge,' and 'have self-control'—are, still in substance they are identical." At this point Socrates takes him up and asks, what is the good of self-control, or temperance, thus understood? And first, what is meant by the knowledge of self? Temperance or self-control is, he admits, a good thing; but he doubts whether if regarded as equivalent to self-knowledge it would be of any service to us; and raises the question, to begin with, how self-knowledge is possible. Thus we find initiated the long debate continued down to our own day over these words and their meaning. In the dialogue before us the conclusion at which Socrates arrives in his argument against Critias is that self-knowledge is, if possible, unique and utterly without analogy. He does not pronounce dogmatically that it is impossible. His respect for Apollo prevents him from going so far. But he unhesitatingly declares his complete inability to see *how* it is possible. As a corollary (with which we are less concerned), he shows that the interpretation of temperance as identical with self-knowledge would have the effect of rendering this virtue inconceivable, or useless.

He argues as follows:—The sciences and arts are not forms of self-knowledge. No form of knowledge with which we are acquainted, or which is of any profit, is of this sort. Each science or art is directed to an object, to be known or produced, quite different from itself. If self-control be a form of knowledge comparable with any of these, it must be knowledge, not of *self*, but of somewhat else. Critias admits that it is indeed peculiar, but asserts that, while all other forms of knowledge refer to objects distinct from self, this (σωφροσύνη) refers to self directly. He further says that self-knowledge involves all other branches of knowledge².

Socrates, having gained some dialectical advantages over Critias on side-issues, resumes the main question, and again calls attention to this strange peculiarity of self-control as identified with self-knowledge, viz. that while all other forms of knowing have objects distinct from self, this alone is directed upon self. Compare the exercise of the perceptions of sense. When one sees, he sees some colour, not his own seeing, which, in fact, he cannot see at all. When one hears, he hears a sound of some kind; his hearing does not hear itself; and so with the other special forms of sense-perception. None is object to itself. The case is similar in desiring. Desire is directed to some form of pleasure or pleasurable

¹ 164, *seqq.*

² I desire to call attention to this remarkable statement, the importance of which will hereafter appear more fully.

activity, not to desiring itself, as its object. Fear is to be regarded in the same way. Of fear which fears no formidable object or event, but only fears itself, we can form no conception. In short, there is no such thing. Nor is there a form of opinion directed to itself, and to no object beyond itself. Yet, according to Critias, when we come to knowledge we find a form of this which is the knowledge of no fact, no truth or object, in particular, but is a knowledge of itself and of other knowledges. This, says Socrates, is astonishing. To find a parallel for it, we should be able to point to a faculty of seeing, which sees itself, and is therefore coloured; or to a faculty of hearing, which hears itself, and is therefore sonant, and so on.

Socrates will not declare self-knowledge impossible. He feels himself to be but a human being, and too weak to decide such a mighty issue. We notice a slight irony in his tone at this point. But he is resolved not to grant that self-control or temperance consists in self-knowledge until he can ascertain of what use it would be if so constituted. Accordingly he challenges Critias to prove 1st that self-knowledge is possible, 2nd that if it be identical with temperance, this virtue is of any service whatever. Needless to say, after this, that Socrates vanquishes his opponent; overwhelming him with arguments to show that knowledge which is merely of self is of all knowledge the emptiest, and is in fact no better than sheer ignorance. It is also as practically fruitless as speculatively hollow. Socrates has too much respect for the virtue of temperance or self-control to allow, for a moment, its identification with a hollow sham like self-knowledge.

Here we find some of the cardinal difficulties of the precept 'know thyself' pointed out by Plato with unsurpassable clearness and force. The investigation of its meaning, commenced in the interest of morality, is promptly extended to metaphysics. And in this dialogue we are taught that self-knowledge, strictly taken, involves a difficulty insurmountable by human, or at least by Socratic, intelligence.

Plato's attitude towards the question would seem to have somewhat changed, if we may trust the evidence of the first *Alcibiades*¹ where (as in the last passage) special prominence is given to the metaphysical, or rather psychological, bearings of the precept—'know thyself.' Starting from the expression to "take care of oneself," Socrates endeavours to sound the full meaning of this expression. And first, what *is* self? If one does not know this, how can one take care of himself? Or, if one tries to do so, without knowing what self is, may he not make some gravely disagreeable mistakes? To take care of ourselves rightly we must obey the Delphic maxim which commands us to know ourselves. Now what merely *belongs* to me is not myself. So with my clothes; and so, also, with my limbs and body. When one takes care of his clothes,

¹ 127 *seqq.*

or of his limbs and body, *e.g.* by gymnastics, he does not thereby take care of himself. Hereupon Alcibiades breaks in with the remark that sometimes he had supposed the Delphic injunction to be the easiest ever given, but that there had been moments in which it seemed to him most difficult. Both he and Socrates agree that obedience to it is indispensable if one is to rightly take care of oneself. Hence the maxim requires study. In the course of the succeeding discussion they agree that self is identical with mind, or soul. It is the first personal self, the I or You who converse together. I when I converse with Alcibiades address myself to himself—not to his clothes or body or other belongings. I address myself to his mind—his intelligence. It appearing plainly to Alcibiades as to Socrates that a man himself is distinct from his clothes &c. and from his body, the question is raised—What is this self? In the negative proposition, as to what self is not, they agree. But to this question of Socrates, asking for a positive definition of self, Alcibiades replies that he cannot answer. Socrates coming to his aid defines self as the agent who employs the body as instrument.

But how to *know* this self is the next question. Now it cannot be known directly, but it can be known indirectly. This Socrates explains and illustrates as follows. The eye cannot see itself directly, but may do so indirectly by looking into another eye, and beholding its own image reflected in the pupil of that other eye. In a way analogous to this the soul can know itself, *i.e.* not directly, indeed, but indirectly. It can look into another's soul, and there behold its own reflection. And as it is in the pupil (which to Plato was the seeing part—the part of the eye most immediately concerned in vision) of another's eye that one's own eye sees itself reflected: so it is in another's faculty of knowing and reasoning that we best discern the reflex of our true selves.

In this passage Plato has evidently not surmounted the grave difficulties expressed in the former, but merely evaded them, by substituting indirect for direct self-knowledge and contenting himself with the former. That he only evades in this way the difficulties he so clearly saw I need not stop to show. I am not now criticising Plato, but merely relating his attempts to construe the Delphic maxim, so as to render it first intelligible, and then practicable.

The above passages are those in which Plato officially addresses himself to the discussion of the precept. They virtually contain all—or at least the basis of all—that he has to say of its interpretation. Self is for him the soul: and soul expresses itself in the first personal pronoun—the I, by the thought, or energy of which a man distinguishes himself from other persons, and from all the world. That a man should know this self, in the obvious sense of the word 'know,' *i.e.* as object, is, Plato concludes, impossible. This conclusion appears in the *Charmides*. For though Socrates there seems to hesitate about pronouncing it, the effect he leaves upon

his hearers' minds is this. He saw that neither by introspection (as it is called) nor by any other form of observation can self—the true subject—be directly apprehended. All attempts at direct self-knowledge are doomed to disappointment. Negatively they are of use. In the effort to know himself one at least may determine what he is not. But positively such attempts lead only to the vain iteration—I am I. Consequently the god at Delphi could not (Plato reasoned) have meant 'know thyself' to be understood of direct knowledge—objective knowledge—of self. There remained only the indirect. Hence it is by knowing the selves of others that we best come to know ourselves. This admission of indirect self-knowledge is of the utmost importance. We shall not here enquire how, if it be impossible to know our very selves, it is possible to know the selves of other persons. But we may see in the admission—that indirect self-knowledge is the only valuable or feasible form of self-knowledge—a germ of thought which afterwards grew and flourished. For the avenue of speculation thus opened up by Plato is much wider than appears from the terms of the dialogue from which we have quoted. Man comes to know himself, not only by the study of other men—their thoughts or acts—but by all methods of study in which any objective truth is attainable. He attains self-knowledge in the highest possible degree when he comprehends the world as the revelation of a system of ideas, which are ultimately but phases of self. This doctrine was otherwise developed by Aristotle. It enters largely into his treatise *De Anima*, but finds its culmination in his *Metaphysics*. It is the legitimate outcome of a train of reflection (first on Plato's, then on Aristotle's part) which was originally started by an impulse derived from the Delphic maxim—know thyself. This doctrine we shall not here examine, but continue our review of the precept to which it owes so much. Consideration of the doctrine itself will require a fuller and more searching study of the writings of Plato and Aristotle. For with these authors it began in the history of philosophy: nor have any of their successors added in this direction much, except explicitness, to their speculations.

To prevent misconception of Plato's attitude we must observe that while (as we have seen) he dismisses as futile every attempt at direct self-knowledge, he is far from suggesting that self is a 'fiction.' The passages already referred to, as well as his writings generally, prove how earnest and deep was his assurance of the reality of the personal self. But the *Phaedo* particularly demonstrates this. Here he undertakes formally to establish the doctrine of immortality, *i.e.* to vindicate for the soul a reality not merely empirical but transcendent, and not merely after death, but before its connexion with the body has begun. And at the close of the dialogue a most interesting passage seems to have been introduced for the special purpose of showing that the soul which had been proved immortal is no other than the personal 'self' of each man. Fearing that a long discussion

occupied with the notion of a third-personal entity called Soul—*Ψυχὴ*—might, however formally conclusive, fail nevertheless to come home to the personal convictions of his auditors as something of nearest and dearest concern to each of them: and knowing the feeble, or misleading, effect of merely logical discourse, as well as of the associations connected with the words and idioms of common language: Plato appears to have devised and introduced the following dramatic episode for the very purpose of finally driving his conclusion in upon the hearts of his hearers, and correcting their lingering doubts and misconceptions. Crito has asked him how he wishes to be buried for he is now just about to drink the hemlock. Socrates replies thus:—"I cannot make Crito here see that I, who have been and am conversing with you all, am the veritable self of Socrates. He still thinks me identical with this body, which he will shortly behold a corpse; and this is why he has asked how he shall bury *me*. All the long discourse I have held with him and you to prove, that when I have drunk the hemlock I shall be no longer with you, but shall have gone to the happy abode of the blessed—all this discourse seems to him to have been but idle words, spoken in the idle wish to comfort myself and you. Give him then my best assurance that when I have died I shall be no longer here, but shall have departed; in order that he may bear my death with more composure, and may not, when he sees my body buried or consumed by fire, weep for *me*, as though *I* suffered this cruel treatment; or say—'I am now laying out Socrates,' or 'carrying Socrates forth to burial,' or 'heaping clay over Socrates in his grave.' For indeed Crito, my friend, I want you to lay to heart this truth, that the use of such incorrect terms is not only wrong, but engenders a peculiar evil in our souls. Be of good cheer, therefore; speak of burying my body, not me; and pray dispose of it in the way you think best, and most usual."

The incorrect use of terms here referred to is that which represents Socrates himself as identical with his body. This indeed is a use of terms common to all times and idioms. But that it was understood and its fallacy exposed by Plato, we learn from this quotation. The dramatic power and propriety of the scene from which it is taken is equalled only by the keen practical insight which this makes Socrates finally and feelingly declare that the soul of which he has hitherto spoken is Crito, is Phaedo—is each friend in turn—the personal existence—the very self of every one of them.

JOHN I. BEARE.

THE 'TYPE-THEORY' OF THE SIMPLE REACTION.

PROFESSOR BALDWIN's evasions are exceedingly skilful, and the eruptions of polite invective which usually follow them exceedingly telling. But those who have followed this discussion with the purpose which I had in beginning it—the purpose of finding, if possible, the true explanation of the results of psychological experiments upon the duration of the simple reaction—will refer from his latest paper to mine, and read comparatively. I shall therefore assume that they have noted the importance of Professor Baldwin's admissions (*e.g.*, p. 81), promises (*e.g.*, p. 85) and qualifications (*e.g.*, p. 89), and proceed at once to the special points emphasised in his argument¹.

1. As to the Leipsic procedure, I can only repeat deliberately what I have before deliberately stated: that, so far as my knowledge goes, no subject who has been found capable of reaction (of giving approximately the same response to the same stimulus in a series, say, of fifteen trials, after practice) has been neglected either in the parent or in any more recently established laboratory. It was Martius—one of the contributors to the Leipsic theory—who first analysed what is now known as the "central" form of the simple reaction, a form which is neither sensorial nor muscular. In the Cornell Study from which Professor Baldwin quotes the 'disposition view' are given the times of several observers who did not show the sensorial-muscular difference; and that although it is expressly stated that the object of the Study was not to examine and account for these divergences from the norm. In face of these and similar facts, the charge is made that I (and, I suppose—else the matter would not be important—the Leipsic school with me) think that certain results "ought to have been suppressed," and that certain cases "ought not to have been investigated"²!

¹ I give one instance of the way in which Professor Baldwin can parry an objection. In his *Psych. Rev.* Study he identified the 'disposition view' with the Leipsic theory. I urged that the 'view' was not a theory at all; and that the type theory had to meet, not it, but the Leipsic theory proper,—something quite different. He now says, in effect: I grant that the view is not a theory; but that leaves my type theory in a better position than ever, since it *is* a theory. To which I, of course, reply that the rejoinder is formally correct, but that the objection holds as strongly as it held before, inasmuch as no comparison of the type theory with the Leipsic theory has been carried out.

² Nine gentlemen took part with me in my Leipsic Study. I published the results obtained from Dr Meumann, Mr H. C. Warren and myself. There are consequently seven (not six) to be accounted for. One devoted almost all his time to the apparatus. One was called away on military service early in the course of the investigation; the series which I have from him promise well. One found the apparatus too complex, and its management too tedious, and withdrew from the research group. One

2. I stated that there were many ways of testing memory type besides that of the reaction experiment. Professor Baldwin challenges me to produce my methods, remarking that he knows of none which are conclusive except those of introspection and pathology. I was referring to the normal mind when I made the statement; and as all psychological experiments on the normal mind, the reaction experiment included, follow or should follow the introspective method, I am afraid that a list of my methods will not broaden Professor Baldwin's knowledge. However, I recognise the justness of the challenge, and give the laboratory and other methods (co-ordinate with the reaction method as sub-forms of introspection) which I have found useful¹.

Methods of Investigating Memory Type. (1) I believe the best method for the determination of memory type to consist in the introspection of a trained observer at times when consciousness is, so to speak, off its guard. He must educate himself to take his mind unawares when he is remembering, or failing to remember. All sorts of rememberings—cases referring to all the different sense departments—must be noted. This, the most direct way in which introspection can be practised, is also, I think, the most fruitful. I have employed it for five (not 'one or two') years; and have only refrained from publishing my results in detail because, as I said in my previous paper, some facts are still obscure to me. (2) I have

gave such curiously slow reactions that they were hardly reactions at all. I was advised by Professor Wundt to continue work with him, but he left the laboratory for a reason which I cannot recall. One was found to be colour-blind, and left my group for another in consequence. I have many series from him, which may be useful some day to compare with those taken from other colour-blind persons. One was unanimously—himself included—referred to the category of incapables in this department of work. It would have been interesting to study his irregularity (here I heartily agree with Professor Baldwin): but that was not the object of my inquiry. It would have demanded simple experiments in many sense spheres: I was desirous of making complicated experiments in one. The last participator was the 'odd man' of the group: a very useful personage, liable to be called upon at short notice to replace an absentee as experimenter or subject, in order to prevent interruption of the work. His results were good; but they were too scanty to be published, and were not intended for publication.

Only one of the seven, then, was rejected on the ground of incapacity: though others might have been, had they continued with me. And it is surely evident that irregularities cannot be explained till we have norms whereby to explain them; *i.e.*, that it was more important to proceed with the original research than to turn aside to examine the single case. This is to me so obvious, that I almost wonder whether Professor Baldwin and myself are not using the term "reaction experiment" in two totally different senses,—such as those indicated by Dr Rivers, *Journ. of Mental Science*, Oct. 1895.

¹ Is it illogical, as Professor Baldwin implies, to state that there are many methods of testing type, and yet that the elucidation of type is difficult? There are many methods of learning Greek.

In *Nature* of Dec. 5, 1895, a reviewer says: "Surely we all know what is the particular language of our own translation of experience." If we did, all the method-work—reaction and other—would be needless.

tried to get at memory type by questioning, with as absolute as possible avoidance of suggestion. This method can be usefully employed only where the subjects questioned have a general knowledge of psychology but are ignorant of the doctrine of memory type. Its results check and are checked by those of the foregoing and next following methods. (3) Questioning with suggestion is a method covering all such tests as Mr Galton's breakfast-table recollection. It has grave dangers, and must be used with great caution. I have tried to check it by what is called the "method of reproduction,"—the subject being required to reproduce his memory image in objective form; and by an error method,—the memory image being compared with some objective standard. Neither check is very easy of application. But my results lead me to think that a method may be perfected, under this general head, which will be especially valuable for the estimation of the relative importance of the different memories in a given consciousness. (4) Another way of testing the relative importance of memories, or the fixity of a particular memory, is the following. A series of experiments on memory is made, with no directions to the subject as to the way in which he is to memorise. He is encouraged to be as full as possible in his introspective remarks. From these, checked by special experiments, the experimenter ascertains the type of memory employed. A new set of experiments is then begun, in which the subject is told to remember in a particular way, different from the way of least resistance. The experimental results and the subject's introspection show whether the shift of type is successful, or only partially or sporadically possible, or impossible. (5) Sometimes two types are used in one and the same act of remembrance: introspection reveals the fact, but cannot say, under the ordinary conditions of memory, which type is the more indispensable. Experiments by the method of reproduction, checked by others with voluntary suppression, are again useful. (6) It is very important to determine whether non-employment of a type is due to nature or habit and education. I am this year trying to get a reliable method of investigating the problem, and have obtained good preliminary results from two forms of the method of reproduction. (7) Another method of testing type in general I owe to Professor M. Washburn. Psychological experiments are often made under distraction: the subject is required to judge of the difference or likeness of impressions while he is adding numbers, etc. The mistakes made in this addition, etc., are indicative of type: if one sees the figures to be added, one's mistakes differ from those made by a subject who hears the numbers spoken as he adds them. (8) Mr A. Fraser has shown how a writer's memory type can be determined from his writings (*Am. Journ. of Psych.*, iv., pp. 230 ff.). This is the method which should replace 'surmise' in the case of Donders.

3. Professor Baldwin wrote of the subjects of his Study as follows (italics mine). "The reagents were, besides the writers (B. and S.), Mr Faircloth (F.), a student who had had *only* the experience gained from the practical work in this subject of the course in Experimental Psychology. His reactions were ready and unconfused, and *from all appearances* he was a normal and more than usually suitable man for such work. The fourth, Mr Crawford (C.), is an honour student in this subject in Princeton. His reactions were *taken in the course of another investigation*, and being so *few in number*, they are included only because they give a certain case of a capable reagent whose sensory is shorter than his motor reaction.

We hope to test him further." I read this to mean that the authors believed their two reagents to be reliable subjects, but were a little doubtful as to the extent of their practice. Hence I said: "The greatest reliance is placed upon the times of B. and S." It was an instance of the psychologist's fallacy: had I written the paragraph, I should have meant what I took it to mean. I am sorry that I misunderstood the writers¹.

4. I come to the matter of Professor Baldwin's own reaction times. In his *Senses and Intellect* he remarks, in general terms, that he had anticipated Lange's discovery of the sensorial-muscular difference. Lange found that the difference averaged one-tenth of a second (*Phil. Stud.*, iv., 494; Wundt, *Phys. Psych.*, 4te Aufl., ii., 311). Many subsequent experiments have confirmed this result (e.g., those published in the *Phil. Stud.*, viii., 144; and those of the Cornell Study before alluded to), and it is now generally accepted by 'the Leipsic people' as the normal difference between the two forms (Wundt, *loc. cit.*; Kuelpe, *Outlines*, 408, 410). If Professor Baldwin anticipated Lange, his times must have shown an original difference of some 85 to 115 σ . If they did not, he did not anticipate Lange.

The differences between the times given for himself in his Study are, as I said in my earlier paper, 29, 7, 12 and 46 σ . No one of these is anything like the sensorial-muscular difference. The 7 and 12 are times no larger than the average *m.v.* of the muscular reaction (about 10 σ); an *m.v.* of 30 σ is not uncommon in the case of the sensorial form; and 46 would be a typical "central" difference. Either Professor Baldwin is mistaken in thinking that he anticipated Lange, or his times have changed since he wrote his *Senses and Intellect*. S.'s differences are 51, 40, 79 and 40 σ . Taken as absolute times, these would all be "central," though one shows an approximation to the true sensorial-muscular difference. I do not think, however, that the differences can be treated in this way, since neither B. nor S. gave what would be ordinarily regarded as a muscular reaction. The times are 171, 149, 164, 138; 195, 184, 158, 179 σ . These are all, in my opinion,—and I believe that

¹ Just as, I am sure, Professor Baldwin will be sorry that he jumped to an interpretation of the sentence in my Leipsic Study, which turns out to be very largely wrong. I must be more accustomed to making mistakes than Professor Baldwin is; for I find it impossible in that case to work myself up to the height of moral and intellectual indignation from which he looks down upon my misreading here.

My presumption that the writers were working definitely upon the type theory from the outset was based on the statement that one of the "questions set for research" was that of "the differences of reaction times for different individuals under identical conditions."

In the paragraph in which he insists that the greatest reliance was *not* placed upon the times of B. and S., Professor Baldwin writes that these times are "very neutral to the discussion." Yet they receive quite detailed treatment in his Study in the examinations following the two Tables. Why?

those familiar with chronometrical results will agree with me,—more or less “central” or mixed reactions. The muscular reaction to sound averages 120 σ ¹.

5. Professor Baldwin resents my method of appraising his theory. I confess that, when I am trying to form a theory of certain phenomena or to estimate a theory already set up, I like to have the facts ‘catalogued,’ ticketed and weighted. Professor Baldwin objects to bringing facts together: he distributes them sparsely in a matrix of theory,—like the infrequent plums in school plum-cake. Then, if the critic complains of the quality of the compound, he says: But I have plenty more plums in the pantry. How does that help the present consumer?

The type-theory has been written about in a medical weekly, a philosophical bi-monthly, a psychological bi-monthly, and a book. Now we are told that its presentation is not yet complete. I did not, of course, know this when I criticised it. Nevertheless, I do not regret the criticism: since it may prevent overhasty acceptance of an attractive hypothesis, and may impel Professor Baldwin to show his full hand to the psychological public.

Something might be said, I think, from the ethical standpoint, of this piecemeal doling-out of a scientific theory. Had Professor Baldwin's article left me a shred or two of moral character, I might have made bold to say it.

6. A few minor differences remain to be cleared up. I deal with them in a foot-note².

¹ Professor Baldwin says that his times “have only changed in that the distinction is less marked than it used to be; and this I go [to] the trouble to explain in the same article as probably due to habit and practice.” In my copy of the Study there is not a word of this explanation. The change in the author's times is not once referred to. A general statement is made about habit towards the end of the Study; I commented on it on p. 514 of my criticism. It does not contain any the most remote trace of personal reference.

² (1) “How can Kuelpe say beforehand that the muscular form will turn out in each case to be shorter than the sensorial?” If Professor Baldwin will read Kuelpe's *Studien* articles,—or if he will even read on for a single page of the “Outlines,” from the place of my quotation,—he will find Kuelpe's answer to this question. (2) “Is not the fact that *F* is a musician something of an explanation of his auditive ‘disposition’?” Not necessarily; not *i.e.*, if other musicians do not show auditive dispositions in their reactions. It is just here that facts are so useful,—or so obstinate. (3) Defect of vision might, certainly, lengthen reaction time. I do not see that this helps to explain the reaction itself. (4) The rest of the paragraph which has called forth these last two remarks is obscure to me, in spite of many readings. The type theory would hardly be a theory of the *geistige Anlagen* which it presupposes, even if it fitted all the reaction facts. It surely posits memory type; it does not state the conditions under which one or other type may be looked for. I fail to see, therefore, how its application can be ‘an investigation of the so-called ‘dispositions’ to find out what they really are.’ The Study, indeed, dismisses this problem (p. 78): it is evident, we read, that attention is now motor, now sensory, differing in individuals with type,—“apart quite

In conclusion, I cannot but express my regret that Professor Baldwin should have seen fit to write a dialectical and personal rejoinder to my criticism, without furnishing new facts or reasons for the absence of facts in earlier publications. A good deal of his reply, and therefore of this answer to it, might have been disposed of in private correspondence. Until the promised support is brought up, the theory remains what it has been,—a very happy idea, or ingenious analogy, apparently natural and probable, but (so far as published) based upon an altogether insufficient substrate of fact.

I also regret Professor Baldwin's attitude to the "Leipsic people." He is a professor of experimental psychology; he must know the literary history of reaction theories,—he must know how much patient work the "Leipsic people" have done, for how many years,—how much the different theorists differ, and how the central theory has advanced,—how the theory compares with other theories, and how adequately it covers the ground of ascertained fact. Yet he nowhere meets the Leipsic theory as a theory, but only questions its norms; he sets its authors contemptuously aside, as if to have worked at Leipsic meant a biassed view of psychology in general; he charges "Wundt, Kuelpe," *et id genus omne* in the present instance with "a flagrant argumentum in circulo," and attributes to them an unscrupulous rejection of results which make against their *circulus*,—when some of these results are published by their own "people," and some even in their own organ! I have tried to write moderately in this and my previous paper, and have no wish to emulate Professor Baldwin in the matter of name-calling at the last moment. But I cannot think that his attitude to a long line of predecessors in the field is either scientifically or ethically defensible.

from the question as to how one or other state of things comes to be as it is in any one case." At the same time, I admit that the incomplete statement of the theory may account for its obscurity on this point, and shall await the complete presentation before offering further criticism. (5) I quoted Professor Cattell's letter, because he allowed me to publish it under his name. I did so altogether unhesitatingly, because Professor Cattell has taken part in the discussion of the validity of Lange's distinction (readers of the *Studien* will know how rigidly his adverse criticisms were 'suppressed' by Professor Wundt), and because every jot of direct evidence for or against the type theory was important to me. When the 'exact figures' and their analysis are published Professor Cattell's cases will, undoubtedly, carry greater weight than they can in outline form. The same is true of Professor Baldwin's cases: I fear that those mean variations which "are too complex to be of any value" will still be asked for by the cataloguing psychologists. (6) M. Inaudi's case tells heavily against the type theory, as published, for the reasons given on p. 513 of my earlier paper.

E. B. TITCHENER.

THE PHILOSOPHY OF COMMON SENSE.

PROFESSOR SIDGWICK's address, published in the last April number of *Mind*, I trust may be taken as yet one more, added to the indications that are already becoming pretty numerous, that the reign of Paradox in philosophy, and of the fallacy that, in that sphere, is synonymous with it¹ is drawing to its close. There are one or two aspects of the questions discussed, however, which strike me in a different light from that in which they struck Professor Sidgwick, and on them I should like to make a few remarks.

I think the claim to validity for the verdict of the plain man is susceptible of being stated more convincingly than we find it stated (p. 151). What is its position, we may ask, as regards the questions of physics? On one aspect of every such question presented, absolutely worthless, on another, quite as good as that of the profoundest philosopher alive. Nor does it matter in the smallest degree, how plain the man is, or how ignorant. I take a glass of clear lime water and a straw, and tell you that I am going to breathe through the straw into the water. Two questions at once arise:—"Will the water turn milky?" and "Why will it turn milky?" The answer to the last is within the sphere of the man of science only; the answer to the first is within the sphere of every man. If, moreover, the answer to the first were not within the sphere of every man, wholly irrespective of philosophical training, then neither answer could have any objective truth whatever.

The question then is:—Is there anything in subject science on which the verdict of the plain man is as good as the verdict of the philosopher, as it undoubtedly is on such a question of fact in physics as that cited? In other words, is there such a thing as fact in subject science? If there is not, this much is certain, that there can be no such reasoning there as the *reductio ad absurdum*, and, in that case, any one statement on any metaphysical, psychological, or ethical question would be just about as verifiable as any other. As psychological controversy, however, in one shape or another is one of the great facts of the world—whatever controversy is not physical being at bottom psychological—and as such controversy takes for granted the possibility of finality, that sceptical conclusion can hardly be the right one.

When we enquire, however, what is the equivalent of the appeal to physical fact in psychical science, the answer that comes uppermost is not satisfactory. We should be told probably that it was the appeal to consciousness, to introspection. An instance of this appeal made by Professor Sidgwick himself has been frequently quoted of late. In connection with the question of

¹ Cp. "In this sphere what *seems is*." F. H. Bradley, *Mind*, Vol. XIII. O. S. No. 49.

the Freedom of the Will¹, "On the one hand," he says, "are all the arguments of Determinism, on the other my consciousness of deliberate choice at the moment of action." The appeal thus put, is looked upon in some quarters, and not without justification, as little better than giving away the Libertarian position. If however we enquire more narrowly what the appeal to consciousness, in such a case, really means, the question shews itself in another light altogether. Consciousness, in the sense of direct perception of the mental present, does not exist. Our knowledge of our states of mind is manifestly only the knowledge of past states. Is then the appeal an appeal to memory? In a sense, it can be nothing else. Memory, however, is always the memory of individual facts, not of abstractions. The mental process that we call the appeal to consciousness thus necessarily consists in recalling some individual fact and comparing it with some general proposition which is alleged to be applicable to it; of recalling an example, in fact, and comparing it with an alleged rule, in order, thereby, to test the validity of the rule. The abstract proposition in this case is:—"The Will is free." I may test it, perhaps, by recalling what happened this morning. I say to myself:—I had to decide this morning whether I should go to the meet of the Rangitikei Hunt or stop at home and write this paper. I decided on the latter course. I compare this series of mental events with the abstract proposition "The Will is free" and decide that it is an instance that comes under such a proposition; that it is something which would be described in the languages of all civilized nations as an act of free choice, or by some words into which these words are translatable. I am thus forced to decide that the proposition "The Will is free" is valid; that it is a fact with which every theory must be made to square. In what other way, indeed, do we decide that two straight lines cannot enclose a space? We compare the concept of straight line with the concept of lines that enclose a space, by calling up individual instances of each, and scrutinizing them side by side. If we ask, however, what is the concept of a straight line, we find that it is nothing whatever but the meaning of the words "straight line." All physical science even must thus, in the long run, rest on the postulate that elementary words must always be used in their natural meaning.

It may be objected:—this makes the questions of philosophy into questions of words. A misconception, however, very readily creeps in here. There is all the difference in the world between a question of language and a question of nomenclature. The "occasional meanings" of words are themselves a natural phenomenon, an evolutionary product; and the task of ascertaining the natural laws that give the rationale of these meanings and explain the connection between them must be the task of some science. Let any one set himself to endeavour to find a hypothesis

¹ I quote from memory.

that will give the rationale of the distinction between wit and humour, and he will find himself engaged on one of the problems of empirical psychology. Let him endeavour to explain and account for the various meanings of Reality, Identity, or Causation, and he will be, at once, deep in the problems of Metaphysics. It seems then that the real task of the subject sciences is to explain and account for the meanings of such words, and that the meanings themselves are our data, which it is altogether illegitimate for us to twist or turn in any way.

A very broad distinction between the fact of physics and the fact of psychology presents itself in this, that the subject of an assertion in physics can be pointed out. We can point to wood, or lead, or water, and having thus fixed their identity as between man and man, we can add what predicates we please. When we ask, however, what is it that fixes the identity, as between man and man, of the subject in a psychological assertion, we see that it plainly is not anything analogous to pointing out. A table got its name for us originally because it could be pointed out, and its pointing out could be accompanied by an oral sign. Fear or hope, wit or humour, were never pointed out. They got names which are transmissible because the same series of occurrences gave rise to the same feelings simultaneously in different people. Hence what is analogous in psychology to pointing out in physics is reproducing an instance of such a series of occurrences as that to which the name originally attached and to which it still naturally attaches; adducing, in fact, a test instance for a general statement. In psychology, as Mr Stout says, it is the oral sign that "objectifies" the idea¹.

From this it follows that technical nomenclature and technical meanings have no place in psychology. We have absolutely no means of affixing them to its phenomena. For the naming of what is physically indicatable one pointing out is enough. The name can be, at once, affixed. What is not thus indicatable can only obtain a name as the result of many, perhaps of innumerable, repetitions; and of the seizure by the thought of the community of the common element in such repetitions. The name of every psychological phenomenon, in fact, registers the discovery of a law of nature as truly as the word "Gravitation" registers Newton's great generalization. It thus becomes comprehensible how, by diving into the meanings of words, important and valuable truth is to be elicited. What we are really diving into is the stored up experience of the race. It is after all no more mysterious than Common Sense should have the truth, though implicitly only, on the questions of metaphysics, than that we should be able to play tunes without knowing the theory of music, or to write verses without knowing the rules of prosody. All through life and nature we see the same precedence of the fact to its rationale, of crude analogy to

¹ "Thought and Language." *Mind*, O. S. Vol. xvi. No. 62, p. 188.

quantitative proportion, of the instinct to the comprehension of its final cause. This is the essential truth expressed in the Hegelian triad, not derived, as Hegel himself imagined, from any *a priori* source, but, like the conception of causation or of reality, an unconscious or semi-conscious generalization from primitive experience. It is not hard to see, in the history of Idealism itself, an example of its operation. Starting from the standpoint of Common Sense we have, in the solipsism of Hume and Kant, the "anders seyn," and in the substitution of the *neutrum* for the Ego by Schelling and Hegel, a return, in so far, to the original conception, modified and enlightened, no doubt, by the controversy¹. Pantheism, whatever it is, is, at any rate, no idle paradox, but the natural faith of a large portion of the human race; and is, in some sense, hardly distinguishable from the Christian doctrines of the omniscience, omnipotence and omnipresence of God. Undoubtedly the other world-famous paradox of Determinism has also only to run its course to come back, in the end, to theoretical conformity with our inevitable and instinctive thought.

¹ A Berkleian like Ferrier might with some justice contend that that clear-sighted philosopher had himself passed through all three stages.

WILLIAM W. CARLILE.

VI.—CRITICAL NOTICES.

Geschichte der neueren Philosophie—eine Darstellung der Geschichte der Philosophie von dem Ende der Renaissance bis zu unseren Tagen. Von Dr HARALD HÖFFDING, Professor an der Universität in Kopenhagen. Erster Band. Leipzig: O. R. Reisland, 1895. London: Williams and Norgate. Pp. xv, 587.

THREE features, says Höffding, distinguish this *History* from its predecessors: first, the greater attention paid to each philosopher's personality and relationship to science and culture; secondly, the special consideration bestowed on the *form* in which problems were raised as distinct from their attempted *solutions*; and, thirdly, the superior adequacy of the work, due to fresh study of original sources of knowledge, as well as to the aid derived from the philosophic literature of the last twenty years.

Höffding is an appreciative and interested student of all systems, but to none—at least of those contained in the present volume—has he given his allegiance. One feels, however, that his interest in the history of philosophy is no mere literary or biographical interest. In formulating the results of his study his purpose has evidently been not only to gratify legitimate curiosity about the past, but also to assist in directing the future, of speculation. His style is lucid and objective; his method, that of faithful exposition, followed by independent criticism. His manner has a 'positivist' tone, which is always satisfactory when, as in his case, associated with a true sense of the problems underlying the superficial ground of positivism. He may be said to exhibit in himself much of what is best in the character of English speculation, combined with the critical idealism of Germany. In an article contributed by him to the *Archiv für Geschichte der Philosophie* 1888 (Band II., Heft i.), he concludes by saying:—"Despite all our criticism and all our realism, we must grant that the ultimate presupposition of philosophy is to be found in the fundamental thought of idealism; though we may not express this thought with the dogmatism of our predecessors, and cannot entertain their high hopes of carrying it out with scientific completeness." At the close of his *Psychology* he uses words to the same effect.

His *History* represents the progress of modern thought as a development. Lines of affiliation and influence are carefully traced.

The main problems are distinguished and kept in clear relief ; while the forms which express them are seen to grow ever more precise and more comprehensive, as philosophy better understands itself in successive generations. To Höffding himself the ultimate fate of philosophy seems to rest with psychology, yet this opinion has not (except perhaps in one or two cases referred to further on) had the effect of disturbing his balanced judgment as a critical historian. In his *Psychology* he asserts that all thinking—that of philosophy, including *Erkenntnistheorie*, among the rest—is object-matter of psychological investigation. In the introduction to the present work he goes further, stating that, if we should be ultimately forced to give up the other great problems of philosophy as insoluble, or as having arisen from misunderstanding, psychology would still remain, the last stronghold of philosophy. If he claims superiority for his favourite theme on the ground that philosophic thought is an object of psychological study, his claim must be resisted by those who reflect that psychological thought, too, is object-matter of psychology, but that this would not justify us in burdening the latter with the problems of its own existence, and of the validity of its reasonings.

Höffding, in tracing the movement which led to the Renaissance, begins with what he calls the 'Discovery of Man'—the 'Humanismus' of the age of Machiavelli and Pomponazzi, in contrast with preceding times when individual thinking and action were helpless in a church-dominated state, which looked for the fulfilment of its highest ends in a future world. He shows—as others have often shown—how a feeling for the importance of humanity as such grew stronger and stronger. He traces the growth of theories of natural right and natural religion, both being a protest against, or a revolt from, the supernatural. With changed views of man's position on earth came changed views of the earth's position in the cosmic system. The mediæval astronomy and science gradually fell into discredit, and ultimately disappeared, before the assaults of renescent speculation. Natural law—it began to be whispered—extends to and involves the very heavens! The old opposition of heaven and earth, the abodes of God and men respectively, was abolished. A bounded universe was no longer adequate to the needs of cosmical conception. Space was declared to be infinite. The universe might still be a sphere, but—it was 'a sphere whose centre is everywhere, its circumference, nowhere.' Popular religion had ever been closely associated with popular astronomy. Even now ignorant or unreflecting persons all round the world regard each his own church-spire as pointing heavenwards. Such crude notions received a severe shock from the new astronomy, when it was seen that the relationship of God to the world must be conceived far differently from the way in which it is conceived by children. With the revival of letters attention was redirected to the original writings of the Greek philosophers, especially Aristotle. It was found that his genuine work had been overlaid with a mass of constructive interpretation by which it was almost concealed. The question on which his

votaries consulted him most anxiously was that of immortality. St. Thomas had been able to derive from him clear statements, or cogent arguments, in favour of the doctrine nearest to the heart of Christianity. But in the *De Anima*, when read calmly and without bias, no such clear statements or cogent arguments could be found. On the contrary, the doctrine therein maintained, that soul is the 'form' of body, while 'form' and 'matter' are incapable of existing asunder, was felt to be distinctly unfavourable to the doctrine of a future life. True, Aristotle in various passages asserts, or implies, the survival, after death, of a certain part or aspect of soul. But he expressly says that *memory* and *will*, which, for ordinary persons give life its interest and worth, must perish with the body. Aristotle's Psychology had, indeed, been very differently interpreted by different classes of commentators. As Höffding says, the Greek scholiasts construed its meaning *naturalistically*; the Arabians (Averroes &c.) *pantheistically*; while the scholastics, particularly St Thomas, had derived from it a theory of *dualism*—of soul and body as distinct, and *independent* entities. Thus free speculation re-opened the momentous question which Christian dogma had closed, and the resulting investigations paved the way for modern psychology.

Naturalism, the most signal feature in the character of Hellenic life and thought, was revived with the renewed study of Hellenic literature. Its growing influence is traced by Höffding in connection with the names of Montaigne, Ludovicus Vives (who first strove to divert attention from the fruitless question as to what the soul *is*, to the fruitful question, what the soul *does*), Jacob Böhme, Grotius, and Herbert of Cherbury. The first book of this history concludes with an elaborate account of the life, personality, and work, of Giordano Bruno, who is, for Höffding, the first great figure—almost as great as any—in the history of modern philosophy.

Höffding next describes the way in which the progress of new ideas gradually revolutionised physical science—or, rather, introduced it. With this subject his deeply interesting second book is occupied. A new problem had arisen: to determine the forces and laws by which the system of nature, constructed by thought out of the data of perception, is regulated. The motions of the celestial bodies had for centuries been referred to the agency of souls. That stars and planets had souls, or were souls, dwelling apart, was then no mere poet's fancy. It filled the place of scientific belief. This belief lasted until the time of Kepler, who himself entertained it at first. In the second edition of his *Mysterium Cosmographicum*, says Höffding, he informs his readers, that the *animæ motrices*, which he had mentioned in his first edition, have no existence. "I once thought that the forces which moved the planets were souls; but, when I considered how these forces decrease with distance, I concluded that they are corporeal." Archimedes had conceived the germinal idea of exact science, but his works remained, throughout the Middle Ages, unedited and unknown. His thought had slum-

bered, but it was not dead. In the 16th century, when edited and translated, he became known as the founder of statics and hydrostatics. Experiment and analysis were now gradually substituted for contemplation and reflection. The doctrine of the Four Elements was abandoned. The form of objects was less thought of than their matter and its changes. Attempts to discover the laws of these changes were zealously prosecuted. Knowledge of laws had, as was easily seen, the advantage of enabling men to predict the course of events, and with the power of prediction is linked, to some extent, the power of control. Thus the practical reinforced the theoretic interest of modern science. Höffding sketches the progress of these ideas from Leonardo da Vinci to Galilei. With the establishment of Kepler's Laws the old animistic explanation of celestial motions had for ever lost its credibility. The mechanical explanation took its place. But, besides this, both Kepler and Galilei taught that arithmetical and geometrical relations pervade all nature. The watchword of one might have been the watchword of both: '*ubi materia, ibi geometria.*' All real things have their numerical and geometrical relations, even when, from the imperfection of our calculus, we cannot ascertain or express those relations. By his maxim—'measure everything, directly or indirectly,' Galilei laid the foundation of modern exact science.

The influence of the new astronomy and science upon philosophy is well described by Höffding in connection with the names of Copernicus, Bruno, and Galilei. The imperfectness of sense-perception as an organ of science had been proved when the geocentric astronomy was refuted. Revision of the basis of empirical knowledge was needed and demanded. The conception of the relativity of motion had profoundly impressed all speculative minds. Alterations in the celestial phenomena, long believed to be absolute, were, after all, relative to the place of the observer. "Suppose the earth away," said Bruno, "there would be no sunrise or sunset, no day or night, no horizon, no meridian." But, if celestial changes are thus relative, why may not alterations in terrestrial things likewise be relative? Changes in the sensible qualities of material objects might be but a re-arrangement of their minute particles, relatively to one another and to us. Thus the conception of the subjectivity of these sensible qualities was introduced. Galilei, indeed, asserted that none of them actually exist in bodies. The actual qualities of body are, he said, figure, magnitude, motion and rest. All others, without sentient and perceiving beings, have no existence.

After the period of new ideas and discoveries came that of efforts at philosophic reconstruction. Great questions called for new solutions. What is the relation between Soul and Body? What is the relation between God and the World? Is Substance *many* or *one*? What is the real significance of the conception of Purpose? Descartes saw the need of a new system of philosophy. He believed that one man could frame it better than many, and that he was himself the one man. His originality in philosophy, as distinct from science, is far

less than has often been supposed. The fundamental position of his constructive thinking—*cogito ergo sum*—had been taken up by many preceding writers, from St Augustine to Campanella. But he is unwilling to admit this. His reluctance to acknowledge his indebtedness to predecessors is a disagreeable trait in his character. It almost seems as if the profound and far-reaching scepticism, which, as Höffding says, he surmounted with such remarkable rapidity and success, was, at least partly, an artful device by which he procured the satisfaction of clearing off, at one *coup*, his unacknowledged debts.

Höffding gives an excellent critical exposition of the cardinal points in the philosophy of Descartes. In one passage, however, he seems to treat the latter with something of unfairness. The greatest service rendered by Descartes to philosophy was, he thinks, that, by carrying out in an extreme form the doctrine of psychological dualism which he had received from his predecessors, he brought its difficulties into a strong and clear light, and thus enabled his successors to advance beyond that doctrine. Höffding, in fact, criticises Descartes from his own monistic standpoint. What Höffding's monism means the following quotation from his *Psychology* (Ch. II. 8 d Engl. Tr. p. 64) will show: "Both the *parallelism* and the *proportionality* between the activity of consciousness and cerebral activity point to an *identity* at bottom. The difference which remains, in spite of the points of agreement, compels us to suppose that one and the same principle has found its expression in a double form. We have no right to take mind and body for two beings or substances in reciprocal interaction. We are, on the contrary, impelled to conceive the *material interaction* between the element composing the brain and nervous system as an *outer form of the inner ideal unity of consciousness*. What we in our inner experience become conscious of as thought, feeling, and resolution, is thus represented in the material world by certain material processes in the brain which, as such, are subject to the law of the persistence of energy, though this law cannot be applied to the relation between the cerebral and conscious processes. It is as though the same thing were said in two languages."

This he calls the statement of an empirical formula sufficient for the purposes of psychology. But it comes perilously near trenching on the province of *Erkenntnistheorie*, especially when, a little further on, he says (p. 67):—"Mind and matter appear to us an irreducible duality, just as subject and object." He himself distinguishes clearly in other places between *Erkenntnistheorie* and *Psychophysik*. For example, in the present volume, pp. 347—8, when criticising Spinoza, he writes to the following effect:—"Spinoza has confounded the relation between mind and matter with that between knowledge and its object. Both mind and matter (existence on its mental, as well as on its material, side) are objects of knowledge, and the *Erkenntnis* problem arises on all sides on which existence appears. *Erkenntnistheorie* has to consider and determine the relation of Knowledge to

its object; *Psychophysik*, the relation of mind to matter. Spinoza's shifting from one of these points of view to the other arose from the fact that the problem of *Erkenntnistheorie* had not in his time received the distinct and independent recognition which it has since obtained. Not until a critical revision of our knowledge has been made, with reference to our capacity for knowing the mental and the material sides of existence, can the distinction between the above points of view emerge."

Now, it is not pretended that Descartes had completely grasped this distinction; had he done so, he would not have essayed to construct a positive theory of the relation between thought and extension as substances. Yet his *cogito*, and his manner of insisting on the first-personal standpoint, prove him to have chosen the conception of self in relation to the object as the true basis for a critical revision of knowledge. Thought and extension were terms which for him primarily represented the terms self and object. Therefore it is that he asserts so strenuously the impossibility of throwing light on their relation by any process of inductive observation. When Höffding (p. 261) contests this assertion, and urges that, on the contrary, induction and observation alone can supply a sound hypothesis to explain the relationship, he forgets for the moment that Descartes' point of view may not be identical with his own, and commits the logical impropriety of judging *Erkenntnistheorie* by the canon of *Psychophysik*. Höffding himself, as we have seen, teaches that the only relation on which *Psychophysik* can enlighten us is that of conscious processes to nervous processes. Here only may induction and observation be used with success. They cannot help us to understand the relation between the knower and the object of knowledge. On this relation none of the physical sciences can shed light. All of them are functions of its operation. Physical analogies serve for the interpretation or elucidation of physical facts, but to demand that they should explain, or contribute towards explaining, the possibility of knowledge is to demand too much. Clearly as Höffding seems to see this, he does not adhere to it consistently: and the criticism of Descartes, to which attention has been just drawn, seems to be an instance of such wavering.

Critical philosophy labours under the disadvantage, that its direct results are negative; that, accordingly, however important for the 'regulation' of science in general, it conduces to no particular scientific results. Physiological psychology, on the other hand, commends itself, as a department of positive science, to all who desire concrete conclusions. But psychologists, in the ardour of their own pursuit, too often either ignore the critical teaching of Kant, or else, while acknowledging it in their prefaces, feel themselves under no obligation to give it practical effect. Their prepossession in favour of a positive science is laudable; but they pay dearly for their neglect of criticism when, as now and again happens, they raise an edifice of theory on an illusory basis; as, for example, on that of mistaken or misapplied metaphors. The critical assault

upon Descartes' theory of the 'two substances' is, doubtless, successful, yet not more so than it would be if directed against Höffding's theory of 'one and the same principle finding expression in a double form.' Neither the constructive dualism of the one, nor the constructive monism of the other, can be maintained, as a metaphysical doctrine: therefore (since they are, virtually, nothing but this) both should be abandoned.

The passage above quoted from Höffding's *Psychology* teems with metaphors. It refers to a 'parallelism' between the activity of consciousness and cerebral activity; treats the material processes as 'outer' forms of an 'inner' unity; and suggests that we may assume between them an identity 'at bottom.' The most favourable supposition respecting this paragraph is, that its author was, when he wrote, thinking solely from the psychophysical standpoint, and that he would steadily refrain from expressing himself similarly with regard to the subject of epistemology. But, even on this supposition, what, after all, is gained by the 'one principle' theory except a 'transfigured' animism? If not this, then a transfigured materialism, akin to Mr Herbert Spencer's doctrine of the 'Unknowable'; only that the agnostic admission is not made by Höffding with the delightful frankness of Mr Spencer. But the supposition cannot be granted without reserve. The tenor of the passage implies, despite protestations to the contrary, that the terms 'parallelism,' &c. may, with scarce the need of a palliative *mutatis mutandis*, be applied to determine, or describe, the relation of self to object. If so, it is important to observe that the whole burden of the meaning is, throughout this paragraph, cast upon the metaphors. Let us consider, for a moment, the validity of those metaphors by whose aid *Psychophysik* tries to supplant *Erkenntnistheorie*. When gas is turned into flame, that which, to perception, exhibits itself as light corresponds coinstantaneously with that which, to science, exhibits itself as an alteration taking place in the molecules of the gas. This correspondence, may, by a metaphor, be called a parallelism. Again, when a change in feeling, *e.g.* from pain to pleasure, takes place, a correspondence exists between the conscious states and their molecular conditions. This correspondence, also, may be denominated a parallelism. The 'parallels' in both instances may, likewise, be referred to as different 'sides,' 'aspects,' &c., of the same fact or process. The metaphors are as legitimate here, as they are, from the nature of the case, almost unavoidable. There can be no intrinsic objection to the employment, in reference to things and processes of the objective world, of modes of speaking borrowed from that world. Such are the expressions 'inner, outer' and others involving spatial relationship. Still, when these are applied for the purpose of explaining, in any useful sense, the connexion between conscious and nervous processes, they are already somewhat strained: more especially when, by a metaphorical dive into the third dimension, it is suggested that the 'parallels' may be united 'at bottom' in 'one principle.' Evidently science is here at its wits' end. But can

further advance along the same line bring us to philosophy? Shall we go on, by the help of these metaphors, to explain, or try to conceive, self as 'inner,' its object as 'outer'? Not so, unless we are prepared to accept the notion, fit only for children and savages, that the thinking Self and the organism are one, or that the former 'resides' somewhere within the *pericranium*. This would be to cast criticism to the winds, or require it to begin all over again. When, in short, attempts are made, openly or covertly, by means of these metaphors, to render more comprehensible the relation of which all thinking whatever is a function, we cannot help saying to the authors of those attempts:—"Your theory is refuted by the very form in which it is expressed; it is a web of abused metaphor, whose flimsy texture one touch of criticism would destroy." Descartes' theory of the two interacting substances is, doubtless, weak, but Höffding's theory, of the 'one principle at bottom,' is scarcely stronger. No mere application of terms, however deft and dexterous, will ever enable us either to rise (with spiritualists), or to descend (with 'transfigured' animists or materialists), to a point from which the dualism of knowledge should, for us, merge itself in monism. In other words, we are but men, and cannot see ourselves and things *sub specie aeternitatis*.

Höffding's inclination towards this theory of 'parallelism' must, also, have suggested the following criticism of Leibniz (p. 399):—"If he had, instead of merely conceiving the corporeal in analogy with the spiritual, also at the same time conceived the spiritual in analogy with the corporeal, he would have seen the need of assuming that individual consciousnesses, despite their wondrous stamp of unity, stand in interaction with the remainder of existences, in virtue of the Law of Continuity which he strongly emphasises, but applies only to each individual monad, not to the inter-relationship of the monads." What our author suggests that Leibniz ought to have done is precisely what Leibniz' theory of 'apperception' rendered impossible. How could a writer influenced throughout, as Leibniz was, by the thought of the spontaneity of self-consciousness, have, consistently with this, 'conceived the spiritual in analogy with the corporeal'? That is to say, how could he have substituted the attitude of *Psychophysik* for that of *Erkenntnistheorie*? We may observe, however, that Professor Wundt has, in recent times, facilitated this substitution, by employing the word 'apperception' in a sense which accommodates it to the service of his favourite science. In a note (*Phys. Psych.* II. 236) he explains and defends his own employment of this characteristically Leibnizian term. Höffding's general tone of thought has been considerably influenced by Wundt.

His treatment of Spinoza is masterly, at once highly appreciative and thoroughly critical. No historian of philosophy has more completely penetrated the meaning of the 'central philosophic system of the 17th century,' read the secret of its development, and exposed its fundamental weakness. The incongruities between 'Spinoza the mystic' and 'Spinoza the psychologist' are here forcibly and clearly exhibited. With regard to Leibniz, Höffding is less sympathetic

and, perhaps for that reason, less satisfactory. In some passages, e.g. in that already mentioned, he seems to treat Leibniz with injustice. He speaks of him (p. 372) as a reactionary against the doctrines of Spinoza, yet unconsciously influenced by Spinoza's fundamental thought. But, though there may be much truth in this, it is hardly fair to tax Leibniz as Höffding does (p. 396), with lack of intelligence or candour, for not seeing and acknowledging the essential connexion, in an important respect, between his own position and that from which his philosophy was, in spirit, a revolt. Leibniz, however, was not merely a reactionary. Further on (p. 400) he is described by our author as a pioneer of the independent speculation of the 18th century.

Höffding's article on Hobbes will be welcome to every student. The character and work of 'the greatest of the 17th century dogmatists' are unfolded and examined with unusual care and minuteness. Höffding possesses, in a high degree, the faculty of character-painting. The really great writers of whom he treats are made to stand before the reader as living men, not merely as the authors of certain theories. A good illustration of this appears in his treatment of Hobbes, "the first in that series of distinguished investigators in the sphere of psychology, who are the pride of English philosophy."

The fourth book in this volume is devoted to the 'English Empirical Philosophy,' to which our author ascribes no small importance. The 'classical English school,' beginning with Locke, chose for its problem the investigation of the development of human knowledge, and of the presupposition on which knowledge depends. Locke and his English successors created its distinct position for the *Erkenntnisproblem*, which, in the great dogmatic systems, had been overshadowed by the *Existenzproblem*. Dogmatism is the procedure which, without examining the conditions and limitations of knowledge, employs our conceptions to explain existence. Criticism investigates the faculty of knowledge before beginning to speculate on existence. The latter commenced definitely with John Locke, however far Locke himself was from comprehending fully the meaning and genuine method of criticism. Höffding informs us that Locke borrowed his use of the terms 'primary' and 'secondary' qualities of body from Robert Boyle, but that the doctrine which distinguishes them, though often attributed to Locke as its founder, really began with Galilei. The latter part of the assertion is scarcely accurate. The doctrine referred to appears first, in the history of Philosophy, with the Atomists, Leucippus and Democritus. They first, as far as is known, distinguished between 'actual' qualities and such as are only 'affections of our sensibility.' The 'actual qualities' of Galilei were included in those of the Atomists, motion, figure, magnitude. Locke's list of 'primary qualities' coincides more nearly with Aristotle's list of 'common sensibles,' in which 'number' is added to the above three qualities¹. Höffding is, in general, disposed to

¹ The Atomists added *διατήρη* and *τροπή*, explained by Aristotle as = *τάξις* and *θέσις*, or 'order' and 'position.' Vide Diels, *Doxographi Graeci*, p. 484; Aristotle, *De Anima*, II. 6, 418^b, 17; *Met.* I. 4, 985^b, 17.

think, or lead his readers to think, that nearly all the ruling ideas of modern philosophy originated in modern times. On the contrary, while the cardinal methods and aims of science are nearly all modern, those of philosophy are, for the most part, to be found in the ancient Hellenic systems. Among the chief exceptions to this are:—(a) the peculiar forms given by Christianity to the Platonic dualism; (b) the Leibnitian theory of monads, as centres of spiritual energy; (c) the *Erkenntnistheorie*, or the critical study of the faculty of knowledge, in the form which it owes to Kant. This subject is one which should, if space permitted, receive further illustration here.

We notice, with some pleasure, that Höffding has an article on Butler, though this feeling is changed on discovering that the argument of the *Analogy* (described as *eine merkwürdige Schrift*) is, as usual, misconstrued. Whoever will read Höffding's observations (p. 499) on this work, and then those of Mr Leslie Stephen (*An Agnostic's Apology* &c. p. 34), will, on comparing both, have some ground for conjecturing the source whence the former derived their inspiration. The ground of conjecture will be strengthened when the reader finds Höffding, a few pages further on, referring to Mr Leslie Stephen's *History of English Thought in the 18th Century*. Mr Leslie Stephen, like Höffding here, calls attention to grave difficulties in Butler's argument: but it seems disingenuous to do this in such a way as to leave the impression that Butler himself was not fully alive to these difficulties, or had made no effort to grapple with them. The fact is that, in the *Analogy* (pt. II. ch. viii. *ad init.*) will be found a statement of the principal points urged against him by Höffding and Mr Leslie Stephen—a statement at least as strong and clear as any ever made by his ablest and most hostile critics. The agreement here noticed between Höffding and Mr Leslie Stephen may of course be a mere coincidence. But if our author relies for knowledge of Butler on the rapid and brilliant critic who has in recent times most persistently assailed him, it may be observed that a genuine historic sense might easily have suggested a better course. After all, for the historian's purpose, the best expositor is, to the original whom he expounds, what moonlight is to sunlight. But when the expositor happens to be also the antagonist of his original, to depend on him for information is, indeed, to guide oneself by a *lux maligna*.

The volume before us ends with an account of the French 'Illumination,' and of Rousseau, the only really great figure, during the 18th century, in the history of French speculation. It is to be hoped that no reader of *Mind* will regard anything above said as intended to disparage the general character of Höffding's *History*. This will, indeed, be a valuable and much needed addition to our libraries, and one for which sincere gratitude is due to its author.

JOHN I. BEARE.

Studies of Childhood. By JAMES SULLY, M.A., LL.D., Grote Professor of Philosophy of Mind and Logic, University College, London. London and New York: Longmans, Green & Co., 1895. Pp. viii. 527.

It has been said that it is only during the decadence of Art that childhood is represented. The Greek, we are told, dealt only with the perfected, the complete human being. The child, being immature, was but rarely introduced, and only came to be considered as Art declined. If this be so, some may hold that the earnestness with which we moderns regard and study child life, is but one amongst the many signs of degeneracy to which Professor Max Nordau calls our attention. But our age is an age of science rather than of art, so let us hope that we may give a hearty welcome to the first careful attempt that has been made in England to study childhood on a large scale, without fear that by so doing we "delight in imperfection" and class ourselves amongst the degenerates of our generation.

Professor Sully's new book, "*Studies of Childhood*," conveys its purpose by its title. It is, as he carefully warns us, simply an attempt to "deal with certain aspects of children's minds which happen to have come under his notice." Hence we must not look for a systematic treatise, or a book written for the psychologist, but rather judge the work from the standpoint of its truth to nature, and its power to rouse interest amongst those most likely to be useful in the new close observation of children, *i.e.* Parents and Teachers.

Undoubtedly there are serious drawbacks to the method of treatment. The want of definite plan makes the book extremely difficult to grasp, and hence very hard to review. We rise from its perusal with a conviction that there is plenty of material here; a number of interesting facts; charming child stories, often most skilfully interpreted; but what we are to learn from it is apt to elude us. What we have to try to get at is how these studies are to help us in the future, and what light they throw on the many problems of childhood.

Professor Sully's work is distinctly that of a pioneer. He points out clearly to us the direction in which we are to work, showing us the particular characteristics of childhood about which further observation is required, *e.g.* the baby's colour sense, a far more difficult matter to observe than most people suppose. Again, observers are urged to collect spontaneous utterances of children; to note how far imagination in one direction coexists with imagination in other directions; evidence concerning children's dreams is asked for; their power of making into actual things, darkness, wind, shadows; their disregard of limbs as a part of self; the exact date at which the pronoun 'I' is correctly used; and the extremely interesting point as to the effect on the child's ideas of things, brought about by learning two languages very early in life.

It may be doubted whether "*Studies of Gifted Childhood*," would not be a more appropriate title for the book before us. The little boy who pretended to paint the furniture with the end of a rope; the boy of two and a half who fought battles with imaginary soldiers; the boy a little over two, who suggested that a "yump of sugar would make a bumble bee (have) heat spots"; the child of two-and-a-half who told a little story about three bears, who found a stick and poked the fire with it; Lyle, who told his father that he could not eat his crusts after the fashion of his progenitor, because "God has made you and me different"; the little two-and-a-half-year-old artist, who drew Fig. 19, p. 349;—were surely all of them gifted children. But it may be that this view is due to the lack of opportunity of observation of many children, though parents seem inclined to agree with it.

It would seem that boys are far cleverer than girls, from Professor Sully's collection of stories, or is it that parents are wont to pay more attention to the sayings and doings of their sons than of their daughters? I suspect that this is the true state of the case.

In regard to Imagination; some observers of children may be inclined to dissent from some of Professor Sully's conclusions. He tells us a tale of a little child who attributed intelligence even to stones, and who used to think the pebbles must be dull for want of change, and to carry them in her basket to another spot that they might get a different view. This Professor Sully thinks a proof of considerable imaginative power, and a quaint expression of sympathy with the insentient world. But is not this an imagination of a lower order, in which the child could not soar beyond the attribution of its own experiences to the inanimate world? The child, it seems to me, has taken a higher flight of imagination when he is able to picture stones and trees as living a distinctly different life of their own, and it is imagination of this kind which will lead the child to develop into the sympathetic comrade who can "put himself into his neighbour's shoes," and rejoice in a joy different in many ways to that he has himself experienced. We might expect the child of the pebbles to grow up capable of sympathy with pains or joys experienced by herself, but not with joy and pain unknown to her, unless a further development of imaginative power took place.

Again, Professor Sully attributes children's jealous exactness as to accuracy in repetition to the child's perfect gift of visual detailed realization. No doubt the upset of the mental picture is one great cause of the child's eager insistence on exact repetition, but this does not seem a sufficient explanation. The little boy of three who was terribly distressed because his grandmother, when reading a story, said she was ill of scarlet fever, protested, "Oh no, Grannie she *didn't* have scarlet fever. When mother reads it to me, she is ill but she *hasn't* scarlet fever," could scarcely have suffered from a shock to visualization, and his whole attitude was that of righteous indignation because his worthy

grandparent had failed in truthfulness. The child's extreme love of truth and accuracy seems to be a factor in this characteristic, and also, it may be, another childish feature, which Professor Sully scarcely seems to dwell upon enough, *i.e.* the child's extreme conservatism. To the child, what has been, must be. It hurts his sense of propriety to suffer change, and this often happens when the change is clearly for the better. In a class of infants, in a Poor Law School, it was a long time before the new introduction of the Kinder Garten system of teaching appealed to them. They preferred the dulllest counting by rote to the manipulation of the most tempting yellow shells; the dry repetition of words, to the examination of the brightest picture.

Our author's delightful sympathy with individual child-life is manifest throughout this chapter, as indeed it is throughout the whole book, and he throws much light on the vividness with which children throw themselves into fictitious characters, as, for example, when the mother kissed the little girl of four who was playing at shop with a younger sister, she broke into piteous sobs and at last sobbed out, "Mother you never kiss the man in the shop." Also the way in which the child attributes life to inanimate objects, as when Lyle said of his wooden horse, "Dobbin is tin (skin) and bone. No tarpenter made Dobbin. Dod made Dobbin."

On the whole this chapter scarcely deserves the title of the age of imagination, but rather the age of make-belief: for imagination in its highest development belongs, as Professor Sully himself shows in "The Human Mind," to the most advanced stage of human culture.

In the particularly interesting chapter on the products of childish thought, it seems as if Professor Sully scarcely made allowance enough for the constant instruction which the child receives at the hands of grown-up people. He draws our attention to this fact in regard to the child's ideas of birth and death, but looks upon the child's tendency to regard all that takes place as designed for us poor mortals as a natural anthropocentric tendency, shared alike by child and savage. Surely the careful instruction of grown-up folk plays some part here. First we have the ignorant nurse and mother teaching the child that "the naughty table" made him fall, and "the kind sun has come out just in time for his walk." Later he learns, "Thank you pretty cow that made Pleasant milk to soak my bread"—a verse which has much to be responsible for. And the extreme teaching of purpose and design in every detail of animal life, so often given in the Kinder Garten, helps the child, who so closely identifies himself with all living creatures, to accept the view that all is made and done for him. Later on this view is greatly strengthened when stuffed birds and squirrels are procured for his lessons and museums,—shot for him, he thinks, in order that he may see and learn.

The treatment of the development of the idea of God is very slight. There is surely far more to be said on this matter, especially in regard to those children who have had little direct theological teaching.

I am very doubtful whether Professor Sully's hypothesis, that the child's first words really imply sentences, will bear the light of closer investigation, though he has the support of Preyer, and I believe, Romanes. According to our author "Down" means a complete sentence, either "The spoon has tumbled down," or "Lift me down." Professor Lloyd Morgan holds that the word "down" is "simply a definite sound that the child has learnt to associate with a particular piece of sense experience." He knows that when he utters the sound "down" he will have the experience of passing through space from chair to floor; and when the spoon falls, he expresses this fact also by the sound "down" because the sound is connected with more than one kind of sense experience. It is not, he maintains, until the child begins to perceive relations that he uses sentences, which are not therefore merely fuller expressions of ideas already held, but expressions of a new order of ideas.

There are several points in which Professor Sully seems to have broken quite new ground. The idea of gradual diminution in size, which some children seem to expect will happen to grown-up people, is quite new to me, though the idea so common to many little girls, that they will by and by become boys, is not dwelt upon. Again, his view that children reify the dark, and regard it as a kind of monster whose eyes are represented by the slightly luminous spots, throws quite a flood of light upon some of the horrors of childhood, and seems to call up dim remembrances of the long buried past. The whole treatment of fear is most useful, and it is well that so much prominence should be given to a feeling that is one of the most marked in early childhood, and to which the attention of parents cannot be too earnestly called, as the fears of childhood have such a marked effect on character; and it is for this reason that it is impossible not to regret that Professor Sully has not dwelt more on those religious fears which form so large a part of the intense sufferings of childhood. The sermons on the great white throne delivered by some emphatic but thoughtless curate, the account of the last day and the sound of the trumpet, have done more to make the young life a perpetual terror than many adults can realize. Children's lies too are so carefully accounted for that the parent trembling for his child's future may surely take courage, and trust to time and fact to cure the romancing propensities of little ones. Let us hope that Professor Sully's exposition on this point will do something to save small folks from the "sound whippings" that are deemed salutary for supposed deceit.

The development of the child's artistic powers, or rather of his intense desire to express himself, deserves a far larger notice than space will allow. It is pleasant to find so strong a plea for children's natural truthfulness, and I am reminded by p. 264 of a whole family of children who each in turn played with a toy-market, and at the ages of three and four always made the supposed thieves reply

to the policeman's "You bad man, what have you done?" "I've stolen a potato," etc. Later in life, as the children's imitative powers grew, the fictitious characters lied boldly and suffered double punishment.

Professor Sully takes perhaps a somewhat optimistic view of childhood. He looks upon it as a region undisturbed by the stir and stress of our introspective, and in some respects worldly minded, nineteenth century. He appreciates to the full the woes and sorrows of child life, as is shown over and over again, especially in the touching story of little C's cry of pain, "You don't understand me," but he thinks the child-world free from modern taint. Is this so? Has not Professor Sully been in some strange way saved from such stories as the following, for the truth of which I can vouch? "Don't be so silly, K," said a parent to his ten-year-old daughter. "I can't help it, Father," was the prompt reply, "I've inherited it from Mother." A small child of four, who was about to be photographed in a Kinder Garten group, remarked with a world-worn air, "I'm perfectly sick of being photographed": and another girl, older by some seven summers, observed that she felt as if nothing were left to be done by way of amusement. But what could be expected when the same child was allowed to keep awake, after her evening prayers had been said, to see the patterns for her new dress that came by the last post? Has not modern life, from Nordau's point of view, crept in here with a vengeance? If we would keep childhood as sacred and undisturbed an abode as Professor Sully pictures it, we must be careful how we extend our scientific observations in that direction. We cannot do better than follow the admirable example given us in "Extracts from a Father's Diary," where little C is watched with such unobtrusive observation through the opening years of his life, and has grown up to boyhood absolutely unaware that he had been the subject of such watchful care.

There is a great danger lest, in our eagerness for discovery, we should ply the child too closely with questions. As Professor Sully says, the child who knows he is observed will soon begin to act for effect, and we may add that his answers to questions will not be absolutely true accounts of his inner state. Take for instance Mr Stanley Hall's paper on Fear, in which the child is asked to state what he is afraid of. To the child fear is cowardly, and it does not cross his mind that not to admit fear is untruthful. Those of us who were supposed by our parents to have no fear of the dark would have died rather than confess on paper that we went trembling up to bed; that the clang of the back door made us race along the dark passage and up the wooden staircase, with a conviction that all the bogies that haunted the house were behind us!

Even such a question as this put to children, "What do you think are the differences between a child and grown-up people?" is a very doubtful one. It at once places the child in a critical attitude towards his elders. Either he crystallizes the bad opinions

he entertains of injustice and unkindness, or is led to give an inaccurate or untruthful account which he thinks will win him favour. The true way to get at knowledge of child-life is to have a child-friend whose confidences are very close, who tells us truly what he feels and thinks as he sits on our knee, and who brings to us his childish troubles as C. brings his to his parents. The boy of about eight who eagerly took up the idea of his brother and himself changing places with his aunt and her friend, and with a deliciously ironical air said, "And then I know what we'll do. We'll take you both to the quay and then, just as you are enjoying yourselves, we shall say, 'Don't go near the edge, you'll *fall in*!'" revealed one of the keenest troubles of boy-life in a way that would never have been expressed on paper.

To gain a true knowledge we must be content to work very slowly; to cultivate in ourselves keen powers of observation; and to accumulate as many extracts from a father's, mother's or teacher's diary, after the pattern before us, as possible. The great lesson taught to all parents and teachers is that, unless they are on intimate terms with little ones, very slight advance will be made in Child-Study. "Children are frank only before the eye of love." But in combination with the moral excellencies, needed for an adequate treatment of children's questions and difficulties, there must be also a scientific mind.

Intellectual as well as moral insight is needed, and those will prove the best observers who are fully conscious of their own infirmities and the difficulties of their task, and who bring to bear upon it an inexhaustible patience and a determination to put aside all prejudice, and preconceived notions. First observation, then hypothesis, lastly verification, and this process over and over again repeated, will be our only chance of solving the enigma of child-life.

The chapter on the child as draughtsman is perhaps the most original in the book, and opens up a delightful field for research.

ALICE WOODS.

Evolution in Art: as illustrated by the Life-history of Designs. By ALFRED C. HADDON, Professor of Zoology, Royal College of Science, Dublin. London: Walter Scott, 1895. Pp. xviii, 354.

PROFESSOR Haddon is one of a growing number of men who are intent on tracing backwards the metamorphoses of ornament, in order that they may disclose its cause, its origin and its meaning, and because they regard the subject as an essential part of the larger question of the evolution of art.

It is an interesting fact that of this band of students those who have been most successful in their search have been biologists. But Professor Haddon is too modest when he declares that he is "neither an artist nor an art-critic, but simply a biologist who has had his

attention turned to the subject of decorative art." In this confession he has laid himself open to the thrust of the predatory reviewer, who has not hesitated to reply that "art cannot expect much at the hands of science" (*Manchester Guardian*).

Perhaps science cannot expect much from those who are artists only, or art-critics by profession. For in truth the lore of ornament and of art has already become a science and, like that of organic evolution, requires the patience and the acuteness of a Darwin. Certainly none but a man trained in embryology could have satisfactorily followed the transformations of the "arrow-ornament," found in Torres Straits (p. 22), which originated in a realistic representation of a crocodile, and passed through successive changes, with displaced nostrils, eyes elongated into a panel, limbs lost, and cloacal plate permanently decorated, until a design was evolved that seems purely geometrical. And none but a zoologist could so well have written one of the most interesting chapters of this book, on the application of biological deductions to designs, in which Professor Haddon maintains, though he hardly proves, that the genesis, growth, and decay of any artistic *motif* are subject to the same laws that govern the evolution of living organisms.

In all scientific treatises two things are needful, definitions and a nomenclature. No one can define the meaning of words better than Professor Haddon, yet from the present work preliminary definition is almost absent. The important word "ornament" is not defined. It is only on the 314th page that we are told that "in patterns the two essential elements are symmetry and repetition," and we are nowhere reminded of the marvellous results of serial arrangement, nor of the fact that symmetry itself is a form of repetition. He assumes too much knowledge on the part of the general reader. On the other hand his nomenclature is welcome and satisfactory. Its need has long been felt. He divides "patterns" into skeuomorphs and biomorphs, and the latter into phyllomorphs and zoomorphs, of which the anthropomorph is a branch; whilst he adds the term physicomorph to denote a design founded upon a process or a phenomenon (p. 118).

A skeuomorph is an embellishment demonstrably derived from some utilitarian structural artifice; and the "rope pattern" is a good example of one. A zigzag may be a skeuomorph. In some particular case, as on bronze celts for example, it represents a ligature. But in other cases it may be a zoomorph. Thus Professor Haddon proves that crocodiles' legs (p. 23), the head and beak of a bird (p. 51), snakes (p. 176), the body of alligators (p. 171), the legs of frogs (p. 214), the extended wings of bats (p. 175), and human extremities (p. 271), may all work out at last, under prolonged artistic treatment, into simple geometrical zigzags. He shews, too, that the zigzag may even be derived from an entire article of women's clothing (p. 97), and so must be called, in his terminology, a physicomorph; and this designation must also include the zigzags of water and of lightning. On the other hand,

that a zigzag often represents a plant-form, is often a phyllomorph, is easily proved.

A number of zigzags, then, may be precisely similar in appearance, and yet their origin may be altogether diverse. They may be homologous, as Professor Haddon puts it, but not analogous; and it is highly convenient to be able, by means of a nomenclature, to divide and to classify them.

One main purpose of the work is to show how and under what laws the figure of an animal or of a plant passes through those changes that ultimately make it indistinguishable from a skeuomorph, that render it subservient to decoration, and that reduce it to what were once thought to be primary geometrical forms.

The realistic animal figure, once recognised, continues to be recognised, no less, the while it undergoes gradual generalisation and simplification, the while it becomes gradually conventionalised. Its original purpose continues to be sufficiently served, for there is no breach in the continuity of observers.

It must not be supposed, however, that in effecting this abbreviation there is any conscious desire on the part of the artificer to "save time and trouble"; such an expenditure would, among "savages," be a pleasurable occupation of mind and body. But, nevertheless, action takes place in lines of least resistance, mentally and physically; and time and trouble are bestowed on multiplying resultant *motifs*, in spreading simpler forms over a widening area, and not at all in elaborating the original.

When a zoomorph is to break up into a zigzag or a scroll of a severe type, other factors in the process are the kind of cutting implement used, the nature of the material to be embellished, and the particular skeuomorph that happens to dominate the artificer's mind, that is most frequently followed by his eye, and that attracts to itself, as it were, and assimilates all approximate delineations.

But sometimes, as in Scandinavian art, the animal figure, in transforming itself into decorative designs, was not sharpened or attenuated or degraded, but rose into magnificent scrolls and swept the ornamental field with curves of rare beauty and dignity. Such an ascent is to be ascribed to the reinforcement of an artistic bent by the confluence of a foreign art-current, by what Professor Haddon calls "cross-fertilisation" (p. 150), as when Scandinavian tendencies were stimulated by a flood of Byzantine influence.

In this connection it is not a little odd that those parts of a dissolving zoomorph that longest survive so as to be distinctly recognised are very various. As regards the human figure, it is often the tongue that alone is left, or the legs; with bats, it is the wings extended in flight; with lizards, the foot in the form of a semicircular boss; and with other animals, the mouth or the eye. The reason of this it would be easy to conjecture, but difficult to demonstrate. Attention, expectancy, the near approach to a skeuomorphic homologue, and the ever-acting need of utility in the object

that is decorated, would operate as factors, though not to the exclusion of others.

When the zoomorph has been traced to its source it becomes necessary to account for the animal presentment itself. What led the prehistoric cave-dweller to carve the figure of a reindeer on the handle of his flint knife? Why did Hervey Islanders incise upon their paddles the form of a woman? Why is an alligator depicted on the ware of Chiriqui?

Professor Haddon sets himself to answer such questions as these. Magic, that must have an imitation of the beings it wishes to control; totemism, that requires a token of kinship and clanship; metempsychosis, that sees bestial forms inhabited by the spirits of deceased men; pride of descent, that carves upon personal possessions the features of a tribal ancestor; religion, that finds abstract adoration made easier by the presence of an idol, of a symbol; such as these are the forces that originated the animal image. And in some cases such forces as these originated the vegetal representation also. Mr Goodyear has demonstrated that religion brought the lotus into the lovely art of Egypt, as the symbol of the sun, of life, of fertility, of the multiple soul; and lotus-derivatives, Nymphæan phyllomorphs, are now ubiquitous in every quarter of the globe.

It is however one of the merits of Professor Haddon's work to have shown that ornamental *motifs* exist that are not lotus-derivatives although closely resembling them. There are scrolls and frets that are skeuomorphs of basketry (p. 111); the guilloche is sometimes a zoomorph (p. 50), and the sigmoid curve likewise (p. 55); whilst the double scroll that is usually called Mycænean, and that certainly came from the banks of the Nile, has been independently evolved from the eye and beak of the frigate-bird in the "Massim" District (p. 50). The causes that have brought the lotus and the frigate-bird to precisely the same peculiar and beautiful pattern in which no one, without instruction, could discover a trace either of animal or of flower, have been indicated, but they form part of a great and serious psychological problem.

Professor Haddon gives a valuable word of warning (p. 333) to those who interrogate minds of a low order. Careful questioning is absolutely necessary and should never be omitted in seeking for an interpretation of "designs" among the people who use them. Such persons are apt to say not what they know but what they think, or what they imagine would please or satisfy the inquirer. Or they will relate the gloss of a missionary. Familiarity with the growth of eponymic legends must prepare the investigator for a like phantasm, "the myth of observation."

Professor Haddon has but little to say on the curious fact that in some civilisations there emerges now and then a love of asymmetry; a subject on which Mr Goodyear is preparing a work. This revolt against symmetry, that startles and refreshes us in Japanese decorative art, that seems to have sprung up like a "sport" in minds saturated with formality, is to be found by those

who look for it widely illustrated in the Gothic mediæval architecture of the Continent. It is justly observed (p. 201), however, that symmetry may be exhibited in the equal balancing of dissimilar designs.

The occurrence of "paired" animal forms in various parts of the world has not yet been explained. It seems that in Torres Straits, in order to mark ownership on certain objects, such as drums and pipes, two precisely similar animal figures are symmetrically disposed with regard to the middle line. Professor Haddon noticed that these paired forms, such as the cassowary, the dugong, the snake, the stingray (p. 17), were also tattooed in duplicate upon women's backs, and were known to be totem animals. He remarks (p. 18) that this pairing strongly recalls the "supporters" of our armorial bearings, and that there is reason to believe that these perpetuate in some instances the totem ancestors of our savage forefathers. There is moreover good reason to believe that the remote progenitors of many peoples practised tattooing. It is pretty certain that those of the Egyptians did so. Now in Egyptian art there was a frequent grouping of animals in pairs, but they were arranged back to back. In Assyria and Greece such coupled animals faced each other. Elsewhere, as in our own "lion and unicorn," the animals differ, but yet are symmetrically disposed. It would not be very surprising if it should turn out that this method of grouping originated in a custom of tattooing correspondent surfaces of the human body with the same design, of depicting the totem on each arm or leg, or on each side of the median line of the trunk.

No one interested in such subjects as these can neglect Professor Haddon's work. It is too comprehensive to be discussed in a brief notice. It is perhaps more comprehensive than a strictness of preliminary definition would have permitted. It even deals with the origin of the letters of the alphabet. But of this the reader has the advantage. It is especially valuable as containing a large amount of personal observation and original research together with much suggestiveness and ingenuity.

For a second edition slips of the pen and printers' errors should be eliminated. Such an expression as "a design may be apparently fairly uniformly distributed" (p. 327) mars an interesting paragraph, but it is more readily perceived by the critic than by the writer. These are insignificant blemishes. All fellow students will be grateful to him for what he has so well achieved.

HY. COLLEY MARCH.

Buckle and his Critics : A Study in Sociology. By JOHN MACKINNON ROBERTSON. London : Swan Sonnenschein & Co. 1895. Pp. xv., 565.

THE volume before us affords a valuable analysis by one of Buckle's most thorough-going admirers of both the philosophical system embodied in the *History of Civilization* and also of the best criticism which that epoch-making work has since evoked. Adequately to assess the value of the criticism to which Mr Robertson in turn subjects the critics, would require a volume of corresponding dimensions ; we can here only briefly note one or two of his main objections to their several points of view and describe, as concisely as may be, the main features of his own. In his preface he does not scruple to affirm that "to read Buckle's detractors is an education in the knowledge of human perversity, fallibility, and profligacy of blame ;" and declares himself "convinced that the common depreciation of Buckle in recent years is in a large measure the result of slovenly reading and slatternly thinking on the part of men wont to sit in judgment on their fellows." It is perhaps somewhat to be regretted that at the outset he should have given such strong expression to his views, when throughout the following 500 pages it is his aim at least to appear as an impartial arbiter between his author and his critics. Nor, indeed, is it easy to resist the impression that in the great majority of the criticisms to which he here in turn successively subjects each hostile writer, Mr Robertson may at least claim to be fairer to his author than those have been whom he encounters in his defence. As regards Buckle and his great work it might, at first sight, well appear that the *argumentum ad verecundiam* is almost irresistible. When writers of such high attainments and various renown as Dr Tylor, Darwin, Macaulay, Matthew Arnold, Mr Leslie Stephen, Mr Gladstone, Mr John Morley, Mark Pattison, Sir Henry Maine, Bishop Stubbs and Vorländer, combine in almost unanimous disparagement of this immature production of a comparatively young writer, dying at Damascus at the age of forty, whose views had been formed in no school and his intellect disciplined at no university, it requires some moral courage to call in question the verdict of such a tribunal. On calmer consideration, however, it may fairly be said that the impression produced by so formidable a consensus of opinion becomes considerably modified. In the first place, it is certain that Buckle, young as he was, knew a great deal more than the majority of his critics. Lookers on, thinking mainly of his youth, were apt to forget how much a mind of great power and originality, with every advantage of leisure and opportunity, working continuously and connectedly for a lengthened period, is able to achieve. Between his father's and his own death, Buckle led an almost uninterrupted career of quiet, concentrated, independent study extending over nearly twenty years. When we remember that it

took Gibbon about the same time from the commencement of his *History* to carry it to completion, we are reminded how much can be achieved under such circumstances; and "since Gibbon's time," in Mr Leslie Stephen's opinion (which Mr Robertson cites) "no Englishman of letters has devoted himself so systematically and vigorously to erect a literary monument worthy of the highest abilities as did Henry Thomas Buckle." In fact, Buckle's mental powers throughout his literary career were all aglow, and Mr Robertson appeals very justly to his known remarkable linguistic acquirements and his singular skill as a chess player as proof that in two very different fields of acquirement his merits were incontestable:—in the former case, as possessed of an extraordinary memory and a singular aptitude for mastering the technicalities of language,—in the latter, as endowed with admirable powers of synthesis. From Abelard, downwards, minds thus precocious and of intense luminosity, have, at rare intervals, flashed meteor-like across the domain of human thought, concentrating in a few years the energy and achievements of many a well spent life of ordinary duration. In the next place, the agreement of his critics cannot be regarded as cumulative evidence. It was the outcome very largely of jealousy and dislike,—supercilious contempt for a young man, who, not having taken a first class at either University, ventured to lay down the law for those who held themselves intellectually his betters. That agreement was the result also, far too frequently, of ignorance rather than of knowledge. "Nothing," says Mr Robertson, "has struck me so much in the investigation of the criticism passed on Buckle as the sheer ignorance of his book on the part of most of his assailants" (p. 36). And, thirdly, it is to be remembered that Buckle, dying in 1862, just missed, as did J. S. Mill, that development of the Darwinian theory of evolution, which, could he have lived to grasp it as applicable to social phenomena, must have afforded him new and invaluable guidance in formulating his bold generalizations. As it was, those generalizations, sometimes hasty and often imperfect and consequently in part erroneous, but rarely without some germ of valuable truth and always eminently suggestive, were assailable at various points to an extent of which his numerous antagonists were not slow to avail themselves. It was not a fort or a strong castle but a city, whose walls in their entire and vast circumference might scarcely be surveyed from its loftiest watchtower, that Buckle had to hold and defend. Since then, a generation has passed away; and Mr Robertson, calling to his aid a new literature and many a notable utterance, has undertaken the task (certainly no light one) of demonstrating that on all the more important questions at issue the weight of evidence is still in favour rather of Buckle than of his assailants. To preserve the metaphor, the defences of the city were, after all, constructed on more really scientific principles than most of the engines of the besiegers. Mr Robertson gives us, accordingly, *seriatim*, the various arguments and objections of the

writers above-named and subjects them to a very rigorous and minute criticism. Intellectually, he appears to resemble his author but slightly. If Buckle's foible was rash and imperfectly considered generalization, his defender's is certainly that of excessive refinement and subtlety. Duns Scotus himself could scarcely, in some cases, have further prolonged the argument; and when Mr Robertson is to be found stopping to cavil at Mr Leslie Stephen's employment of a somewhat careless "indeed," the reader is apt to grow impatient and to hurry by more real and serious criticism. Briefly, however, to sum up the writer's chief indictments,—we find Mr Leslie Stephen arraigned on various points: his arguments against Buckle's theory of the relation between climate and civilization,—his misrepresentation of Buckle's opinion that "a permanent and continuous development of man's moral and intellectual qualities" is still, scientifically, unproven,—his assertion that he "cannot help feeling that more philosophy is held in solution in a few pages of *Old Mortality* or the *Heart of Midlothian* than in a hundred such volumes as Buckle's,"—and, finally, his criticism of Buckle's somewhat vague and contradictory language with regard to the employment and comparative value of the inductive and deductive methods. On the first of these questions, Mr Robertson certainly appears to have the better of the critic. Mr Leslie Stephen objects to Buckle's theory of the influence of climate, that "the relation between climate and civilization is not constant" (p. 50). To this Mr Robertson rejoins that it is "like saying that the law of gravitation ceases to operate when you climb a ladder"; and his argument in reply is certainly supported by the principles laid down by Professor Ratzel in his *Anthropo-Geographie*.

In dealing with Theodore Parker's criticisms,—which challenged alike the plan of the *History* and the List of Authorities cited by the author, the stress laid by Buckle on the influence of natural phenomena (as seen in the terrorism of the Hindu religion) and of diet, as shown in the greater or less activity of imagination—Mr Robertson urges arguments the force of which is undeniable. "We must take," he says, "all the phenomena into account together, for the complete explanation. The distance between the athletic Greek and his Gods was comparatively small, in terms of his self-confidence as well as in terms of the less awful aspects of his environment; the distance between the Hindu and his Gods was great, in terms of his physical abjection as well as in terms of the tremendousness of Nature; the effect of Nature on thought being thus seen to be operant through physique as well as through ideas" (p. 86). As regards the elements which went to build up the phenomenal development of ancient Greece, he points out that "while the mythology of India grew or fructified in the vast Indian regions, a world in themselves, with no definitely foreign interference, the cultures of ancient Greece represent a complex of four civilizations."

In dealing with certain "Academic Criticisms," Mr Robertson

points out that Gibbon, Grote, Finlay, Lewes and Huxley owed nothing to Universities, and he holds that Professor Fiske has "not been prudent in prompting an inquiry which reveals that a great deal of the most original and important research and thinking done in England for generations has been achieved by men who either never attended a University or got next to nothing for such attendance" (p. 105). "When we admit," he says elsewhere, "that Buckle missed what disciplinary good the school and the University can yield to youth, we must not forget that he probably was what he finally was in part because he wholly escaped the averaging influence of the English public school and University training, so strangely potent for the destruction or restriction of all originality of mind" (pp. 520-1). Passing by the chapter on the "Anti-scientific View of History" (in which Dr Stubbs and Professor Froude figure as the chief offenders), we come to Chapter XI on "Buckle's real Errors." In this Mr Robertson sets forth "a number of faults" which he has himself discovered in his author's pages, but which he holds when corrected "leave the main values of his book only the more certain." One of these corrections strikes us as singularly happy and just. Buckle, in his first chapter, ventures on one of those dangerous generalizations which so frequently shake our faith in his guidance. "The most celebrated historians," he observes, "are manifestly inferior to the most successful cultivators of physical science: no one having devoted himself to history who in point of intellect is at all to be compared with Kepler, Newton, or many others that might be named" (p. 362). Mr Robertson rightly says that "on any view the proposition will not stand. Newton and Kepler represent one great kind of capacity; but they also had a great capacity for quite commonplace error, and it is quite impossible to make any relative measurement of their powers as compared with those of Gibbon" (pp. 362-3). In fact a unit of comparison is altogether wanting.

The concluding chapter on "Buckle's Personality" is of considerable interest; and not the least valuable portion of the volume is the Summary of Buckle's theory, as Mr Robertson interprets it, presented in the Appendix, together with the "Additions and Modifications" which he would himself suggest.

J. BASS MULLINGER.

VII.—NEW BOOKS.

Florentine Painters. By BERNHARD BERENSON, author of *Venetian Painters*, *Lorenzo Lotto*. New York: Putnam, 1896. Pp. 141.

I HAVE asked leave to introduce to the readers of *Mind* a book apparently destined for a very different public, because I am convinced that, instructive to students and lovers of art as Mr Berenson's "Tuscan Painters" is bound to prove, its great and original suggestiveness is fully appreciable only by professed psychologists.

That Mr Berenson himself is not a student of mental science, that he does not write for students thereof, and that his book shows no traces of psychological training, are circumstances which, as it seems to me, enhance rather than diminish the interest of his work in the eyes of psychologists. For we get in this volume a coincidence with some of the most significant recent psychological discoveries and hypotheses, which is convincing for the very reason that it comes, not as a result of philosophical speculation on the connexion between art and other mental phenomena, but in the course of an attempt, on the part of an already distinguished connoisseur and art-historian, to make others share the æsthetic emotions of which he is himself aware.

The subject of æsthetics, of the how and why of the perceptive and emotional phenomena connected with art and the Beautiful, is one which has occupied my own thought for many years, and upon which, in consequence, I have myself arrived at a certain number of conclusions. With these conclusions the facts and theories propounded by Mr Berenson by no means tally either as whole or parts; but such differences, however considerable, are thrown into the shade by my thorough agreement with the method and the spirit which Mr Berenson has applied to æsthetic problems; so that the brief space of a review will be more profitably employed by my placing Mr Berenson's views before the readers of *Mind* rather than by my criticising them in the light of my own experiences and hypotheses. And first, about the rank which the æsthetic phenomenon takes in life and life's development. Mr Berenson holds that, so far from the æsthetic phenomenon being, as we have been told, a species of accident in evolution, a sporadic activity which has survived, "like sea-sickness" says Mr W. James, without any apparent reason for survival, the æsthetic phenomenon has a very distinct *raison d'être* in the fact that it represents a direct increase of vitality, or, as Mr Berenson expresses it, that "art alone can give us the life-enhancing qualities of objects."

This life-enhancing power of art is not however sufficiently explicable by the reasons given by contemporary æsthetics; or rather, contemporary æsthetics, not having recognised the specific properties of art, have failed

to explain artistic pleasure by reasons sufficiently specific to that form of pleasure: artistic pleasure, in painting (of which Mr Berenson exclusively treats) has been explained, for instance, by sensations in the visual apparatus, helped out by an army of ideational and emotional associations, and generally dismissed from psychological analysis as a case of the *play instinct*, itself a very vague entity indeed.

But Mr Berenson, basing his notion upon what he perceives as going on inside himself, offers an explanation which, without discarding any of those previously given, reduces them to mere coincident factors. The main pleasure of painting, he says, is due to the very special manner in which painting can make us realise spatial relations and movement: this special manner of realisation producing directly the sense of heightened vitality.

But how can realisation of spatial relations and of movement act in any way upon a phenomenon so organic, so bodily, as the sense of vitality?

Stripped of certain complications and (as I think) contradictions, Mr Berenson's answer can be reduced to a very startling formula: "We realise objects," says Mr Berenson (p. 84), "when we perfectly translate them into terms of our own states, our own feelings."

And this formula must not be understood in any metaphorical fashion. The states to which Mr Berenson alludes are *bodily states*, the feelings are such as are accompanied or actually produced by bodily sensations. "We watch (p. 86) those tautnesses of muscles and those stretchings and relaxings and ripples of skin *which, translated into similar strains in our own persons, make us fully realise movement.*" The thorough realisation by a painter of the spatial relations, of what Mr Berenson calls the *tactile values* of the objects represented, produces in the thoroughly appreciative observer much more than the mere cold intellectual awareness which has hitherto satisfied writers on æsthetics: "Our tactile imagination is put to play immediately. Our palms and fingers accompany our eyes more quickly than in the presence of real objects, the sensations varying constantly with the various projections represented, as of face, torso, knees, etc." (p. 12). Still greater is this activity of our own muscular sense where not merely spatial relations, but movement is efficiently forced on our realisation by the painter—"unless (p. 50) my retinal impressions are immediately translated into images of strain and pressure in my muscles, of resistance to my weight, of touch all over my body, it means nothing to me in terms of vivid (visual) expression."

Briefly: first, all vivid visual perception is due to the conversion of ocular impressions into feelings of bodily activity; second, such bodily activity produces a sense of *living* in those who experience it; and third, painting having the means of producing such a condition by processes more direct, more efficacious and more economical than those of reality, painting possesses the power of enhancing the sense of our own vitality. The painter has selected, isolated and reinforced all the characteristics which increase, without exhausting, the energy of him who perceives them. Hence we get in painting what Mr Berenson describes as a "hyperæsthesia not bought with drugs, and not paid for with cheques drawn on our vitality,"—and thanks to it we very literally "feel as if the elixir of life, not our own sluggish blood, were coursing through our veins."

Such is the essence of Mr Berenson's hypothesis. The reader of his volume will find it there complicated unnecessarily and even contradictorily with notions of self-conscious "Wille zur Macht" of which I have ventured to strip them. The reader will also be puzzled, until he remembers that Mr Berenson is essentially a connoisseur, a professional

expert rather than an engaging æsthete, by the deliberate neglect of so important an item in æsthetics as mere "Beauty": the book will seem, even within the field purposely restricted by the author, narrow and even crotchety. But it appears to me that no person with the habit of æsthetic introspection can deny that Mr Berenson has at last applied to artistic phenomena the only method which can lead us to differentiate and study them as an important branch of psychic life. Similarly, I imagine that no student of contemporary mental science can fail to be deeply impressed by the coincidence between Mr Berenson's analogies and hypotheses and the trend of physiological psychology. As regards myself, although I cannot accept Mr Berenson's views as a sufficient explanation of the pleasure derived from painting, I am desirous to place his little book in the hands of psychologists, because it seems to show in the most convincing and also the most suggestive manner that æsthetics ought to become one of the most important fields for psychological observation, analysis and speculation. How significant the empirical study of æsthetics can be Mr Berenson has already shown with an acumen and a philosophical imagination which promise great achievements therein on his own part.

VERNON LEE.

Thinking, Feeling, Doing. By E. W. SCRIPTURE, Ph.D., Director of the Psychological Laboratory, Yale University. Meadville: Flood & Vincent, 1895. Pp. xii., 304.

From the author of the research *Ueber den associativen Verlauf der Vorstellungen*, and from an unwearied advocate of the "New Psychology," we had a right to expect a text-book of no inconsiderable freshness and originality. There is but little doubt of the presence of both of these qualities in overflowing measure in the work under review: but a freshness amounting to coolness in the unacknowledged appropriation of diagrams and text, together with an originality most in evidence in a condescending jocularity of a nursery-book type, is hardly fitted to commend the volume to any well-wisher of the science of Psychology. The work bears the imprint of the Chautauqua Century Press, and is written, the author informs us in the preface, "expressly for the people." After acquainting himself with the character of the book the reviewer feels constrained to say that its ready acceptance by those to whom it is dedicated would indicate that "the people" stand more in need of the services of a missionary than of a psychologist.

It is this very effort to write a popular treatise which is the bane of the book. The effort is seen in the comparatively large amount of text and cuts devoted to the reaction-times of athletic exercises—at present of small psychological value,—in the disproportionate amount of space given to colour-blindness, in the remarkable 'practical' suggestions (as in the colour-top device for matching dress patterns), and even in appeals to popular prejudice. Apropos of colour-blindness the author remarks: "Are we to suppose that the many Englishmen are colour-blind who can see in the Irish flag only a symbol of anarchy?" (p. 176). This, as the politicians would say, seems to be an attempt to catch the Irish vote. As is to be expected of a popular work, the book is profusely illustrated: there are 294 illustrations for 295 pages of text. To five of the cuts the author gives *prima facie* evidence of ownership—for his electrotype likeness appears therein—but to some of the rest his title is not so clear.

Whether a given diagram or cut may be regarded as having passed into the common stock or not is a matter of literary casuistry. It is also to be

said that in an elementary text-book one is not called upon to acknowledge the source of each cut separately. But Dr Scripture has drawn from many sources beside the common stock. He has fitted out his book with diagrams and cuts from treatises, investigations, works and catalogues, and nowhere—not even in the preface—does one find any acknowledgment of his broad indebtedness.

A graver fault confronts us in the text. Dr Scripture has quoted copiously from Creighton and Titchener's translation of Wundt's *Menschen- und Tierseele*; but has neglected to pay to the translators the tribute of quotation marks. Twelve pages of the thirteen making up Chapter XVII. are taken from this translation without other acknowledgment of the source than the general statement that "Wundt is to be followed for the rest of the chapter"! And this is by no means the only case of "borrowing."

As regards the plan of structure of the book, one finds that it amounts to a series of chapters connected chiefly by the binding. Chapter III. is on Reaction-time; Chapter VI. on Power and Will; Chapter XVI. on Feeling; Chapter XVIII. on Memory. The book can be read beginning with the last chapter as easily as with the first. This amorphous structure is, however, probably deliberate with the author; for he informs his readers that the "New Psychology confines itself strictly to fact." This statement is to be reconciled with the fact that the latest authoritative work on experimental psychology—Külpe's "Outlines"—abounds in theory and hypothesis.

Thinking and Doing take up twenty of the twenty-two chapters comprised in the book. Feelings come off with twelve pages, and Emotions with thirteen—twelve of these from the unacknowledged source mentioned above.

Dr Scripture is especially severe upon what he calls the "arm-chair" psychologist. "For several thousand years," he writes, "psychologists have been waiting and watching: it has never occurred to them to labour also. Sitting at home in the arm-chair is very pleasant; but it is not the way to do business, and consequently psychology has been going backward." It is a pity that the misguided English philosophers, from Locke, Hume, and Berkeley, down to the Mills, had not been checked in their retroactive efforts by the olfactometer and the hypnotic button; and it is to be regretted that Dr Thomas Brown, who sometimes clung to his arm-chair through the entire night in writing his lectures, had not been kindly advised that it was "not the way to do business."

It is to be sincerely deplored that a psychologist of Dr Scripture's ability has chosen to sacrifice his work to an attempt to come down to the popular level,—an attempt, in the reviewer's opinion, which has resulted in excavations beneath the popular level. The book itself bears evidence enough of the author's knowledge of experimental psychology and of his fertility of resource in experimental methods. But despite this, it is to be hoped that custom may never stale the variety of this particular form of the "New Psychology," and that it may ever remain unique.

FRANK ANGELL.

The Child and Childhood in Folk-thought. (*The child in primitive culture.*)

By A. F. CHAMBERLAIN, M.A., Ph.D. New York: Macmillan & Co., 1896. Pp. x., 464.

This work is a sort of lexicon of 'paidology.' It is a careful and laborious compilation of all that refers to the child and childhood in popular thought. There are thirty-three chapters, dealing with children's food, souls, flowers,

animals, etc.—the child as poet, linguist, actor, teacher, judge, oracle-keeper, weather-maker, healer, hero, etc., etc. Each chapter is subdivided into numerous sections. Thus that which treats of the child in the primitive laboratory has paragraphs upon licking into shape, massage, face games, primitive weighing, primitive measurements, measurements of limbs and body, tests of physical efficiency, sleep, and heroic treatment. Six chapters are lists of proverbs and familiar sayings about children and childhood, collected, as the author candidly remarks, from pre-existing dictionaries of quotations and proverbs. A very useful bibliography of 549 titles, and three elaborate indices close the volume.

The writer's thesis is that "the child is as important to the savage... as to the civilised" man. "Everywhere through the world the activities of childhood have been appealed to, and the race has wonderfully profited by its wisdom, its *naïveté*, its ingenuity and its touch of divinity." "Upon language, religion, society and the arts the child has had a lasting influence, both passive and active, unconscious, suggestive, creative. History, the stage, music and song have been its debtors." And the thesis is supported by a great mass of authoritative evidence. Mr Chamberlain's enthusiasm has enabled him to weld his materials together into some sort of unity; and his occasionally emotional way of presenting his facts will bring him readers, while it does not seriously affect his scientific attitude.

Not the least valuable thing about the book is its suggestiveness. There is hardly a section that does not furnish a subject for detailed investigation to the anthropological psychologist.

The Number Concept: its origin and development. By L. L. CONANT, Ph.D.
New York: Macmillan & Co., 1896. Pp. vii, 218.

This is a very complete study, by a mathematician, of the anthropology of number. The faculty of counting is taken for granted. The author believes, with Külpe, that "the primitive conception of number" is "fundamental with human thought," and so does not attempt, as Preyer has recently done, to derive it from something which is not numerical. The only legitimate objects of inquiry are "the primitive methods of counting and of giving visible expression to the idea of number."

Ch. I. discusses finger counting, and deduces certain peculiarities of the finger scale from the facts of attitude, right-handedness, etc. Ch. II. compares the limits of numerical systems in savage and civilised communities. Chs. III. and IV. trace the origin of number words. We find that "all above two, three or at least four are almost universally of digital origin." A table is given of the various ways in which the primitive mind conceives of number: thus "one" is "existence, piece, group or beginning"; "eight" is "five-three, second three, two fours, or two from ten," etc. Ch. V.—a very interesting chapter to the psychologist—deals with other than the natural (finger, *i.e.* 5, 10 and 20) number bases. Binary and quaternary systems are not rare; ternary bases are less frequent; while "there is probably no recorded instance of a number system formed on 6, 7, 8, or 9 as a base." Traces of enumeration by such systems are discoverable in systems otherwise formed, but the author proves that they call for special and local explanation. The duodecimal scale is "the scale of civilisation," but will never supplant the decimal in ordinary use. The two concluding chapters take up the quinary and vigesimal systems in detail.

Professor Conant has been admirably careful in his use of authorities, and the judgments which he passes upon evidence are impartial and well-balanced. His book is the most comprehensive treatment of its

subject extant: between two and three hundred number scales are transcribed and analysed. It may be cordially recommended.

Movement. By E. J. MAREY. Translated by E. PRITCHARD. (International Scientific Series, vol. lxxiii.) New York: D. Appleton & Co., 1895. Pp. xv., 323.

Psychologists, no less than physiologists, must welcome the appearance of Professor Marey's *Le mouvement* in an English dress. Many of the methods which it describes have been, and others will be, of service to experimental psychology. To mention one only,—it is surprising that use has not been made of the zootrope, for the investigation of associative and apperceptive completion of impressions, to a far greater extent than has actually been the case.

Mr Pritchard has given us an accurate and readable translation. But he has made some regrettable departures from the original, cutting out a round dozen plates (among them, the two phototypes with which the French volume ends) and the author's index to illustrations. The numbering of the early plates has been quite needlessly altered. There may be reasons for certain of these changes, though none is alleged in the preface. But the bad printing of the plates in general is inexcusable. In the writer's copy, Fig. 17 is no figure at all; and some fifteen others would be unintelligible, were their French impressions not familiar.

The Psychology of Number, and its applications to methods of teaching arithmetic. By J. A. McLELLAN and J. DEWEY. (International Education Series, vol. xxxiii.) New York: D. Appleton & Co., 1895. Pp. xv., 309.

This little book falls into two distinct parts, as its title indicates. The second and practical part is, so far as the lay mind can judge, exceedingly good. What is more, its polemical tone seems to argue that it is needed at the present juncture as a corrective to vicious school practice. The first part discusses the psychical nature, origin, definition, etc., of number by the method, and even in the terms, of the Hegelian dialectic. It will hardly recommend itself either to the psychologist or the mathematician as an adequate account of the number idea and the number judgment.

The Beginnings of Writing. By W. J. HOFFMAN, M.D. (Anthropological Series, No. 3.) New York: D. Appleton & Co., 1895. Pp. vii., 209.

There is very little psychology in this volume, which should have borne a more specific title. It is a popular account, profusely illustrated, of the forms and underlying principles of American picture-writing. Only now and again (e.g. in the chapter on Symbols) does the psychological problem come to the front with any explicitness.

At the same time the writer keeps well within the limits of established fact, and the psychological reader will find, between the lines, a good deal to interest him.

Philosophy of Theism: being the Gifford Lectures delivered before the University of Edinburgh in 1894-95. First Series. By ALEXANDER CAMPBELL FRASER, LL.D., Hon. D.C.L. Oxford, Emeritus Professor of Logic and Metaphysics in the University of Edinburgh. Edinburgh and London: William Blackwood & Sons, 1895. Pp. 297.

Professor Fraser's final chapter has for title "What is God?" This is the problem of his book. He considers in succession the solutions offered by Panmaterialism, Panegoism, and Pantheism, and concludes that none of

these can afford a satisfactory ultimate conception. If the question were purely theoretical, Agnosticism might be a tenable position. But Agnosticism would logically lead to universal nescience, and "the mental state in which one doubts about everything is a state in which man cannot live" (p. 278). We need a practical answer to the question, What is God? From this point of view "the deepest and truest thought man can have about the outside world, is that in which the natural universe is conceived as the immediate manifestation of the divine or infinite Person, in moral relation to imperfect persons, who, in and through their experience of what is, are undergoing intellectual and spiritual education in really divine surroundings" (p. 280).

The Worship of the Romans, viewed in relation to the Roman temperament.

By FRANK GRANGER, D.Lit., Professor in University College, Nottingham. London: Methuen & Co., 1895. Pp. ix., 308.

A well-written and useful account of the magical and religious customs and beliefs of the Romans. In the writer's view magic is more primitive than religion. The titles of the chapters are: "The Roman Spirit," "Dreams and Apparitions," "The Soul and its Companions," "The World Around," "Nature Worship," "Primitive Thought," "Roman Magic," "Divination and Prophecy," "The Primitive Idea of Holiness," "Holy Places and Idolatry," "The Divine Victim," "The Sacred Drama." The writer approaches his subject with the insight derived from a thorough knowledge of recent work on folk-lore.

Studies in the Evolutionary Psychology of Feeling. By HIRAM M. STANLEY.

London: Swan Sonnenschein & Co. New York: Macmillan & Co., 1895. Pp. vi., 390.

This work is characterised by vigour and originality. The writer regards Feeling as the primary fact of psychical life both in the race and in the individual. Not only Cognition in general, but every cognitive state, is generated by a prior pain or pleasure. Most of the book is devoted to an analysis of the special emotions and of their development. Whatever may be thought of the writer's general theory, there is much in this part of the work which is distinctly valuable. (Fuller notice follows.)

Criminal Sociology. By ENRICO FERRI. London: T. Fisher Unwin, 1895. Pp. 284.

This is the second volume of the Criminology Series edited by Mr Morrison. In the preface to the present volume he calls attention to the fact that the problem of crime is again pressing its way to the front and demanding re-examination at the hands of the present generation. As evidence of the dissatisfaction which exists with regard to penal institutions in their present form, Mr Morrison calls attention to the large number of government inquiries which have recently been held respecting them. The result of these inquiries has been to sustain Professor Ferri's opinion that the criminal problem will not be solved by a resort to measures of a merely punitive and repressive character. Crime is a product of adverse individual and social conditions, and it can only be successfully dealt with by ameliorating those adverse conditions where it is possible to ameliorate. In cases where these conditions are not susceptible of amelioration, the only other effective alternative is to exclude the offender from ordinary social existence. It is unnecessary for us to review this book at greater length inasmuch as the original Italian edition has already been noticed in the pages of *Mind*. The English edition will be a boon to those who do

not read Italian. It is an admirable introduction to the problems of Criminology.

Le Socialisme au XVIII^e siècle. Étude sur les idées socialistes dans les écrivains français du XVIII^e siècle, avant la Révolution. Par ANDRÉ LICHTENBERGER, docteur ès lettres. Paris: Félix Alcan, 1895. Pp. 471.

This volume is an interesting and comprehensive examination of the Socialist ideas current in French literature in that portion of the eighteenth century which preceded the great Revolution. In the execution of his task M. Lichtenberger, whose name reveals his origin, has exhibited a pleasing combination of German exhaustiveness and French lucidity.

He has ransacked the literature of the period with admirable patience and industry, and must be complimented on the singular spirit of impartiality with which he sets forth the economic ideas of the writers whose works he has undertaken to analyse.

In recent years Socialism has become an exceedingly vague term. In the mouths of many men it is merely another word for philanthropy, and even amongst those who use it in a more scientific sense there are considerable differences of opinion as to its interpretation. In order to make matters perfectly clear on this head M. Lichtenberger begins by telling his readers what he means by Socialism. With him it is not a body of doctrine which covers the whole field of collective life and effort. He regards it solely in its economic aspect as a theory which has for its object the collective ownership of property. The question therefore which he has set himself to answer is this: In what manner was the collective ownership of property held, and to what extent did this conception of the ownership of property permeate the public mind in the ninety years anterior to the Revolution? In order to answer this question satisfactorily we are presented with a careful examination and analysis of the literature which bears upon it. This involves an exposition of the ideas of writers such as Meslier, Montesquieu, D'Argenson, Morelly, Rousseau and his disciples: the Encyclopedists and the physiocrats. Socialist ideas in a more or less definite form were not confined to writers on philosophy and economics. They had a wider audience and were popularised in romances, poems, and plays. Accordingly M. Lichtenberger discusses and interprets the nature of the relations which existed between socialism and literature. M. Lichtenberger's examination of the Socialist utterances of the eighteenth century leads him to the conclusion that Socialist principles were not as a rule enunciated with the object of revolutionising the economic basis of society. These principles were formulated and appealed to in order to procure what would now be considered very moderate reforms. The writings of Brisson de Warville and of the notorious Marat contain interesting examples of this method.

The excessive severity of the criminal law was a subject which aroused the keenest indignation in the pre-revolutionary period. Punishments were inflicted on offenders altogether out of proportion to the gravity of the offence or the necessities of social security. Capital punishment was the penalty for petty theft and most other offences were punished with similar harshness. In order to obtain a mitigation of the punishment of offenders against property both Brisson and Marat bring forward arguments fatal to the existence of private property altogether. But these arguments were adduced merely to secure a more humane penal code and not for the purpose of effecting fundamental changes in the economic constitution of society. Of course there were writers who went further, but in all cases their ideas were of a speculative character.

In order to translate these ideas into practice economic conditions were required which did not exist in the eighteenth century. Socialism as a plan for the economic organisation of collective life has only assumed a practical shape since the rise of great industrial and commercial enterprises. It is the coming into existence of these great undertakings which has produced latter day socialism. But it was the men of the eighteenth century who pointed out the way for existing socialist parties by ventilating the idea that civil equality is impossible without economic equality. To all who are interested in the evolution of political ideas and doctrines M. Lichtenberger has produced a volume for which they will be grateful.

La Superstition Socialiste. Par le BARON R. GAROFALO. Paris: Félix Alcan, 1895. Pp. 299.

It must be said that M. Garofalo has written a lively, vigorous and combative book, and a book exhibiting a considerable amount of controversial ability; but the effect of his polemic is to some extent destroyed by the needless alarm with which he contemplates the Socialist movement. He tells us that his book is directed against revolutionary Socialism, but revolutionary Socialism, or for that matter Socialism of any serious kind, is not a theory of the State which need discompose the equanimity of sensible men. Garofalo's fear of socialism arises largely from his detestation of the mob. Of all Latin sayings the one he loves best is "Odi profanum vulgus," "I detest the mob," he says, "in every shape and form. The applause of the ignorant does not give me the slightest satisfaction; their hootings are equally a matter of indifference. That is, perhaps, one of the reasons why I have never become a candidate for public offices, not even for the position of a Municipal Councillor. Instinct may play a part in this sentiment of repugnance, but reason justifies it too. I am persuaded that everything which proceeds from the mob is always bad. It can destroy, but it is incapable of constructing. I believe that no one can do a more detestable thing than to disseminate among the poorer classes the idea that they have been dispossessed and that they have a right to take their revenge. I clearly perceive that the ill will excited among one section of the population against the other can produce no other result than a cooling down of the sentiment of cordiality and solidarity which constitute the foundations of human Society."

Garofalo is evidently afraid lest the mob should become the instrument of agitators bent on the destruction of private property as a social institution. There is really little cause for alarm on this score. Of all sections of the community the masses are the most conservative. No doubt the masses have at times participated in revolutionary episodes. But these episodes must not be accepted as an expression of the settled and habitual temper of the popular mind. On the contrary they are very exceptional incidents. It is quite a mistake to infer from these exceptional outbursts that the masses are always in a mood for violent and fundamental social transformations. As a matter of fact the habitual temper of the masses is to hold on with an unreasoning tenacity to the habits, customs, traditions, prejudices and institutions of the past. The lower down we go in the scale of civilization the greater is social immobility.

This is a truth which we should be justified in describing as a Sociological law. This law is applicable to the various grades of Society, and it may be said with a near approach to accuracy that the lower down we descend in the social scale the greater is the aversion to change. The advent of the democracy to supreme power so far from producing revolution is much more likely to produce stagnation. It is, in fact, probable

that those countries which are most completely under the dominance of the masses may eventually lose their place in the international struggle for existence owing to the extreme unwillingness of the electorate to adjust their laws and institutions to the new conditions which are always developing in the family of nations.

De la Contingence des Lois de la Nature. Par ÉMILE BOUTROUX, Professeur à la Faculté des Lettres de Paris. Paris: Félix Alcan, 1895. Pp. 170.

This essay is a reprint of the thesis presented by the author for the doctor's degree at the Sorbonne in 1874. Its main object is to demonstrate the existence of a radical contingency in nature in order to make room for free will. Indeed so strongly does M. Boutroux insist on contingency that at times he is led into a position dangerously like Hume's. Thus he asserts that causality, i.e. an invariable connexion between events, is only contingent and not necessary.

The author begins with a discussion of necessity, and finds that Logic and Mathematics give us the perfect type of it. But this is just because they are abstract sciences and do not deal with reality in the concrete. The laws of Logic have little to do with the inner nature of things. If we turn, on the other hand, to the actual world, we find contingency everywhere. Being actually given is not a necessary consequent from the possible. Its existence is contingent. Again, reasoning *a posteriori* and *a priori* proves a radical contingency in the natural production of genera and species such as we find Biology dealing with. There are no "kinds," the denotation and connotation of which are exactly determinate and unchangeable. In a similar way M. Boutroux proceeds to point out how, as we ascend the scale of being, new elements are constantly met with which cannot be logically deduced from what we may have previously found existing. Thus life cannot be explained on mechanical principles, and consciousness cannot be deduced from physical and physiological laws.

Having thus cleared the ground, M. Boutroux is in a position to introduce free will. His conclusion is that each being, animate or inanimate, is gifted with a spontaneity to realise the ideal of which it is capable. That ideal is to become as like God, the First and Final Cause of all things, as the nature of the creature permits of it. It is given to man to approximate to this perfection in a greater degree than the other animals, and so he is gifted with a greater freedom. "L'homme est l'auteur de son caractère et de sa destinée" (p. 145). This constant striving after an ideal is the essence of things. The laws of nature are the artificial and fixed image of what is living and changeable in its very essence. Their apparent necessity is explained by the stability inherent in the ideal itself. So necessity becomes the mean term between the world and God. The essay as a whole is brightly written.

W. F. TROTTER.

Histoire de la Philosophie Atomistique. Par LÉOPOLD MABILLEAU. Paris: Félix Alcan, 1895. Pp. vii., 560.

M. Mabillean's task is a twofold one. He attempts, in the first place, to write the history of Atomism, and, in the second, to form an estimate of its value as a scientific and metaphysical hypothesis. His opinion on the second question is that of a decided adherent of the Atomist school. Atomism is for him at once the most satisfactory of scientific working hypotheses, and the metaphysical doctrine which lends itself most easily to the support of a theistic and spiritualistic conception of the universe. "The corpuscular philosophy," he says, quoting Voltaire, "is the shortest

path to the discovery of the soul and of God." From the historical point of view M. Mabillean's undertaking is perhaps more ambitious than fortunate. He begins his review of the various atomistic systems of antiquity with a survey of "Atomism among the Hindus," devoted mainly to an account of the system of Kanada which he assigns, in spite of the suspicious analogies with Aristotelian technical terminology, to a period "several centuries" earlier than the era of Leucippus and Democritus. The account of Kanada is followed by a sketch of Greek atomism, which M. Mabillean, in opposition to the established views on the subject, regards as having been largely influenced, to say the least, by Hindu speculation. Unfortunately for M. Mabillean the force of his argument is greatly weakened, if not altogether destroyed, by his readiness to rely on the worthless statements of Neo-Pythagorean authors of the type of Iamblichus, whose judgment, not to say their veracity, is hardly above suspicion. A chapter on "Atomism among the Arabs" serves as the connecting link between Greek and modern speculation on the subject. We are then conducted through the theories of the alchemists and the "theological" atomism of the eighteenth century, to the "scientific" atomism of the present day. (Fuller notice follows.)

A. E. T.

Le Réalisme Métaphysique. Par ÉMILE THOUVEREZ, Professeur agrégé de philosophie, Docteur ès lettres. Paris: Félix Alcan, 1894. Pp. 282.

M. Thouverez holds with Hegel that the rational is the real. The categories of human knowledge are, according to him, not merely subjective forms; they constitute the nature of the real, and have their source in the nature of the absolute creative activity. This doctrine is what M. Thouverez means by metaphysical realism. Perhaps the chief interest of his book lies in the view which he takes of the interconnexion of the categories. He arranges them in an ascending series, according as they express more and more profoundly the nature of reality. Each higher category presupposes the lower as its necessary condition: but at the same time contains something essentially new. The lower is related to the higher as matter to form, in the Aristotelian use of these terms. The coincidence with Aristotelian doctrine is emphasised by the teleological language used: the lower categories are constantly spoken of as existing for the sake of the higher. The principles of Identity and Sufficient Reason, Deduction, Induction, Analogy, Faith, Number, Space, Time, Substance, Cause, End, Duty, and God, form the main topics discussed. There is much that is suggestive and helpful in the detailed treatment of these conceptions.

Der Kampf um einen geistigen Lebensinhalt. Neue Grundlegung einer Weltanschauung. Von RUDOLF EUCKEN, Professor in Jena. London: Williams & Norgate, 1895. Pp. 400.

This work, the author tells us in his preface, is intended to be an uncompromising polemic against the Naturalism of the present age, the object being to establish from a new point of view the reality of an order of Being independent of, and superior to, the Universe of sense-perception.

Professor Eucken complains that the idea of a mode of existence not amenable to sense-consciousness has become almost an obsolete tradition. To rehabilitate this *geistigen Substanz*, as he terms it, in the realm of contemporary culture, is the design of the present Essay. The entire work is divided into two main divisions, the first designated the Ascent, or *Aufsteigender Teil*; the second the Descent, or *Absteigender Teil*.

It is not very easy to make clear to an English reader the exact position assumed by Professor Eucken, but perhaps he may be best described as a Metaphysical Anarchist. He will not be bound by the speculations of philosophy, nor the dogmas of science. He neither believes in a noumenal nor a phenomenal Universe. He trusts neither the averments of sense nor the categories of the understanding. But even an Anarchist must take his stand somewhere, so on page 6 we find the learned Professor condescending to an axiom which is sufficiently comprehensive, if not very intelligible to any but Hegelian students. As far as we can make out, however, from this initial pronouncement it would seem that the one real substance of the Universe is a spiritual entity, the soul of the age, embodying eternal truth, and constituting a timeless reality. This spiritual substance, this increasing purpose that through all ages runs, we are familiar with as the *Zeitgeist* of the poets, and it might be construed without much violence into the goal of evolution, the immovable outcome of the cosmic process. On page 16, Professor Eucken tells us that the main contention, the *Hauptproblem* of the present treatise, is to establish the activity, spontaneity and eternally expanding development of the individual soul. These are the characteristics of the only reality that can be grasped by the human intellect. Autonomy is the criterion of reality. The Idealist Metaphysic has here certainly an advantage over the Materialist inasmuch as the former rests on the positive conception of reality, while the latter is content with a mere negative abstraction termed the unknowable. Professor Eucken seizes upon this dialectic weakness in the scientists' theory of Being. There is no Autonomy in Nature, therefore there is no reality in Nature. Just so, admit the scientists, but then we seek our reality in a realm transcending Nature. But, replies the Idealist, our conception of Nature is that of a spiritual process, the very principle of which is that self-initiating Autonomy which is not to be found in the phenomenal Universe. At page 31, Professor Eucken contrasts the substance of spiritual life with that of physical life. Spiritual Being is a series of consciously self-initiated impulses, whereas the life of the Materialist is the evolution of a surd fatalist potentiality enchainning the succession of phenomena in a rigid order of development. In spiritual life there is no potentiality, no necessary sequence; the child is not the father of the man, as the oak is in the acorn.

The considerations opened up by the conception of a spiritual as opposed to a physical mode of existence have, as Professor Eucken shows, something more than an academic interest. The question of the possibility of moral amelioration in a human being is every day discussed amongst philanthropists, and reduced to practical experiment by enthusiastic reformers. With the spiritualists the life of the individual is undergoing perpetual renovation (p. 32), so that there is always a possibility of making a fresh start. At page 213, Professor Eucken marshals the empirical evidence, in support of the reality of a power in Nature, transcending and dominating Nature; such a power is a spiritual energy quite apart from any mechanical or physical force. The triumphs of Art in the subjugation of nature are proofs that the human intellect is informed by a faculty, able to enslave and control the brute properties of matter; and while these properties are constant in the mode and extent of their operations the power of human knowledge is perpetually increasing and modifying our conceptions of natural processes. Again, the records of history attest the reality of a hyperphysical mode of being. There is a universe of ideas determining the course of human affairs, from generation to generation, issuing in the progress of culture and the evolution of social types. A struggle for existence is perpetually being waged between the immanent forces of nature and the plastic powers of the *geistigen Lebensinhalt*. It is true that in this

conflict the spiritual side is not always triumphant, and it is to a consideration of this aspect of existence that Professor Eucken addresses himself on page 245. Space is then devoted to a criticism of the Optimistic and Pessimistic views of this great problem,—the mixed character of human life. Professor Eucken is not inclined to accept any of the current solutions of the enigma, but counsels philosophers to look for a higher synthesis (p. 267).

The very fact of the ever present *Kampf* in the realm of nature Professor Eucken takes to be a warrant for the reality of a spiritual mode of existence where intellectual and moral antinomies will alike be reconciled.

The second part of the work is an application of the theory of Being, propounded in the first part, to the practical requirements of human existence such as Religion, Ethic, Art, Philosophy. There is much elevating and stimulating suggestion in Professor Eucken's Essay, but his mode of exposition is somewhat too comminuted and prolix.

T. W. LEVIN.

Die Spiele der Thiere. By KARL GROOS. Jena: G. Fischer, 1896. Pp. xvi., 359.

In this book the author seeks to prove that the play of animals is due to an instinct developed by natural selection, and useful in practising those movements which are of service in the struggle for existence. Herbert Spencer's view that play depends on superfluity of energy is regarded as insufficient; superfluous energy being a favourable but not an essential condition. Imitation, which Spencer gave as a secondary cause of play, is shown in many instances to be out of the question, and is regarded by the author as due to an instinct allied to the play instinct. A full and interesting history is given of the opinions which have been held on the nature of instinct, and the author concludes by agreeing with Ziegler, whose theory resembles that of Spencer in regarding instinct as complex reflex action depending on inherited nervous arrangements, without however accepting with Spencer the inheritance of acquired characteristics. The various forms which the play of animals, and especially of young animals, may take, are very fully described, with an abundance of illustrative examples drawn to a large extent from the work of those who have observed animals in a wild condition. The first and simplest kind of play is called "experimenting" and includes all those movements by which the young animal obtains command over its own movements and over external objects; other kinds of play include hunting, fighting, building, nursing, etc., while the performances of courtship are treated in a separate chapter, distinguished as they are from the other forms, in that they have a direct purpose.

Much space is devoted to the psychological aspect of play. The play of young animals is held to be purely instinctive, the only psychological accompaniment being the pleasure attending the satisfaction of an instinct. In the higher animals the author believes that there is often consciousness of sham-occupation, giving in support of this view instances of dissimulation in animals. In the various grades of the consciousness he sees divided states of mind analogous to those occurring in the hypnotic and allied conditions. When considering curiosity in animals the author advances the view that the primitive form of attention is not concentration on an impression actually present, but the expectation of a future impression associated with preparation for the instinctive movements which the expected impression will call forth; a watching cat is given as a typical example. (Does not an expected impression imply a conscious-

ness of the nature of the impression which in its turn involves previous attentive perception?)

In his preface the author complains that most of those who have written on animal psychology have too much sought out human characteristics. His own aim has been rather to study those features which are especially characteristic of the animal, and his work shows a marked freedom from the anthropomorphism which vitiates so much work on the animal mind. A second book is promised which will deal with the subject of human play.

Die Umwälzung der Wahrnehmungshypothesen durch die mechanische Methode. Nebst einem Beitrag über die Grenzen der physiologischen Psychologie. Von Dr HERMANN SCHWARZ. Leipzig: Duncker & Humblot, 1895. Pp. xx., 195 (Erster Teil: *das Problem des unmittelbaren Erkennens*), 213 (Zweiter Teil: *das Problem des Sinnesqualitäten, & Anhang*).

Dr Schwarz has set himself the task of combating the prevailing tendency to regard the secondary qualities as subjective affection objectified. In an earlier work he directly attacked this current fallacy, as he rightly deems it. In the present volume he resumes the same topic from an historical point of view and gives a most interesting account of the phases through which the problem of sense-perception passed in the transition from scholasticism to the modern mechanical view of the material world. Suarez, Thomas Aquinas, and Gabriel Biels are selected as typical representatives of the scholastic point of view. Dr Schwarz, while exhibiting clearly the difficulties of the doctrine of "species" mediating between the object and the mind, points out that the schoolmen were in the main free from a confusion which has had a disastrous influence on more modern theories. They did not interpose between the object and the mind a second vicarious object, as those do who hold that we know in the first instance only our own subjective states. Suarez, for instance, insists that we perceive "non speciem sed per speciem." Descartes and Hobbes are taken as representative of the revolution in the theory of sense-perception which the mechanical view of nature produced. The influence of the old doctrine of species on Descartes is well brought out. In some points however we question the writer's interpretation of the Cartesian position. It is clear to us that Descartes held the secondary qualities to be in their own nature purely modes of consciousness. When we conceive them distinctly we can according to him conceive them only in this way, and not as being in any manner or degree modes of extension. Dr Schwarz says that for Descartes they were qualities of the complex formed by the union of soul and body.

The appendix on the limits of Physiological Psychology contends that the distinctions possible from a physiological point of view cannot keep pace with the number and subtlety of the different modalities of consciousness. The argument appears to us quite unconvincing.

Le Dottrine Filosofico-Religiose di Tommaso Campanella. By Dr GIO. SANTE FELICI. Lanciano; 1895, (London: Williams and Norgate). Pp. xxxii., 285.

Campanella comes last in the brilliant series of Italian Renaissance philosophers begun by Marsilio Ficino and continued by Pomponazzi, Telesio, and Giordano Bruno, who attempted, but with less success, to do for ancient thought what the Italian Humanists did for classic literature, and the Italian artists for the classic ideals of visible beauty. They form

not so much a progressive line as a curve returning on itself. Dr Felici, without exactly intending it, shows us his hero in complete reaction towards the Aristotelian and medieval point of view from which Ficino had broken away. This was due partly to the spontaneous movement of speculation, partly to the circumstances of an unhappy life (1568—1639). A born Neapolitan like most Italian philosophers, Campanella entered the Dominican order in his youth, was accused of conspiring against the Spanish government and thrown into prison, where he spent the twenty-seven best years of his life, in the course of which he underwent the torture seven times. It was in these untoward circumstances that most of his works were written, with the fear of the Inquisition no less than of the foreign tyrants before his eyes. A natural vein of religious mysticism not unmingled with charlatanism was intensified by long seclusion from the world, by bodily suffering, by hope deferred. To conciliate his judges and to procure the intercession of the Pope he made concessions to authority which ended by being half-sincere. When at last set free and provided with an asylum in France the bent of his mind was irrevocably determined in a direction widely diverging from that of modern civilisation.

The philosophy of the Italian Renaissance never transcended the limitations or added to the categories of Greek thought; but those limits included the whole field of naturalism, and those categories were so numerous that an appearance of originality might be produced by shuffling them into new combinations. When the Florentine Academy had temporarily broken the yoke of Aristotle not only Plato but the earlier and later physical systems began to be studied afresh and were powerfully aided by the Copernican astronomy. In time Aristotle reasserted his authority, but he was now read with other eyes and found to be on one side of his activity the father of systematised observation, and of inductive science. On the other side as a metaphysician he was a chief factor in Neo-Platonism, the religious mysticism of which blended easily with the great spiritual movement provoked by the Reformation.

All these elements met and mingled in Campanella, but with an increasing preponderance of those which made for theological interests. In him, as Dr Felici well observes, is repeated the general movement of Italian Renaissance thought. First he is attracted by the study of nature, then by the study of Mind. Psychology replaces physics (p. 45). As might be expected, Aristotle, whom he had so passionately assailed, now becomes his guide. He adopts the famous distinction between soul and reason or nous, using the latter as an organ for the apprehension of religious truth. Religion is in fact the tendency of the mind to expand itself to infinity (p. 138). Think away all the limitations of Mind and you arrive at an infinite substance which is God. As the universal principle this substance is Power; as conscious of itself it is Wisdom; as self-delighted it is Love. Here we have the celebrated "Primalities" of Campanella—and with them we find ourselves back in medievalism. Creation is not so much out of nothing as a combination of the supreme principle with nothing—a subjection of the Infinite to a series of restrictions and negations constituting a descending chain of partial existences from the throne of God to the verge of nonentity. What chiefly differentiates Campanella from the Neo-Platonists seems to be his substitution of the Infinite for the One, a process due, I think, to the revived Epicureanism of the Renaissance, such as we can study best in Giordano Bruno. Whether he was really more orthodox than his martyred predecessor may be doubted. Dr Felici institutes an elaborate and instructive comparison between the two Dominicans going to prove that Bruno valued the popular religion as very useful for the morals of the uneducated classes although untrue in

itself, while Campanella interpreted its dogmas as a historical manifestation of metaphysical truth, and therefore themselves a part of the great cosmic process, the self-evolution of the Infinite in nature and man (pp. 210-216). According to his critic Campanella "pantheizes," but is not simply pantheistic, believing as he does in a deity which though immanent in nature also transcends it. Whether this deity is or is not personal seems left undetermined. In no case is his religion supernatural in the sense of being miraculously revealed, and his exclusion of every specifically Christian dogma is complete. "What need of a 'new creature' if human nature tends by virtue of an inborn and necessary inclination towards the highest good?" (p. 145). Campanella in his *Atheismus Triumphatus* declares that "the chief merit of Jesus Christ consisted in preaching the simplest form of natural religion to men and aiding them to conform to it. His death had no higher value than that of a luminous example 'moriendi pro ratione'" (p. 221). But natural religion is as we have seen merely the tendency of the mind to expand itself to infinity, which again is the supreme form of that self-preservation which our philosopher borrows from Stoicism as the definition of virtue (p. 134).

Like the Stoics also—a derivation which Dr Felici does not notice—Campanella looked forward to the eventual union of all mankind in one fold under one shepherd; but, strange as it may seem, his fold was the Roman Catholic Church and his shepherd was the Pope. Like the ancient thinkers he regarded history as a series of recurring cycles, and Dr Felici has shown that to credit him with anticipating the modern idea of perpetual progress is a mistake (p. 170). But the sweep of the cycles was to go on expanding until the whole globe was reduced under the sway of a single theocratic despotism. The great discoveries and inventions of modern times had no other value or meaning in his eyes than as steps towards this consummation, which remained his ideal through life, the only change being that in his youth he looked on Spain, and in his later years on France, as the predestined instrument for its accomplishment. His illusions about the desirability and feasibility of establishing papal supremacy over the secular monarchies are worthy of the thirteenth century, and remain totally unaffected by the Reformation. Protestantism he would have suppressed by any means however violent or fraudulent, and we are told that his unscrupulousness in this respect leaves Machiavelli far behind (p. 238).

Thus the last thinker of the Italian Renaissance exhibits with extraordinary clearness the pervading note of Italian thought, the dream of universal empire, that legacy from old Rome which has been the inspiration of so many great Italians, from Dante to Vico, from Rienzi to Buonaparte, from Gregory VII. to Leo XIII.

ALFRED W. BENN.

RECEIVED also:—

- Leslie Stephen, *Social Rights and Duties*, London, Swan Sonnenschein & Co., 1896, two volumes, pp. 255 and 267.
 J. Morris, *A New Natural Theology*, London, Rivington, Percival & Co., 1896, pp. 347.
 H. Baynes, *The Idea of God and the Moral Sense*, London, Williams & Norgate, 1895, two volumes, pp. xiii., 80, and 104.
 A. K. Fiske, *The Jewish Scriptures*, New York, Charles Scribner's Sons, 1896, pp. xiv., 390.

- J. Welton, *A Manual of Logic*, vol. II., (The University Tutorial Series), London, W. B. Clive, 1896, pp. xiii., 292.
- S. N. Patten, *The Theory of Social Forces*, Philadelphia, American Academy of Political and Social Science, 1895, pp. 151.
- A. Mosso, *Fear*, translated from the fifth edition of the Italian by E. Lough and F. Kiesow, London, New York, and Bombay, Longmans, Green & Co., 1896, pp. 278.
- F. Queyrat, *Les caractères et l'éducation morale*, Paris, Félix Alcan, 1896, pp. viii., 168.
- G. L.-Fonsegrive, *Essai sur le libre arbitre*, Paris, Félix Alcan, 1896, pp. 581.
- J. Halleux, *Les Principes du Positivisme contemporain*, Paris, Félix Alcan, 1896, pp. 347.
- J. Lachelier, *Du fondement de l'induction*, Deuxième édition, Paris, Félix Alcan, 1896, pp. 173.
- H. Michel, *L'Idée de l'État*, Deuxième édition, Paris, Félix Alcan, 1896, pp. ix., 653.
- J.-L. de Lanessan, *La Morale des Philosophes Chinois*, Paris, Félix Alcan, 1896, pp. 124.
- W. Wundt, *Grundriss der Psychologie*, Leipzig, Wilhelm Engelmann, 1896, London, Williams & Norgate, pp. xvi., 384.
- G. Weill, *L'École Saint-Simonienne*, Paris, Félix Alcan, 1896, pp. 308.
- H. J. Holtzmann, *Lehrbuch der neutestamentlichen Theologie*, erste Lieferung, Freiburg I. B. und Leipzig, J. C. B. Mohr, 1896, London, Williams & Norgate, pp. 48.
- E. Koch, *Die Psychologie in der Religionswissenschaft*, Freiburg I. B. und Leipzig, J. C. B. Mohr, 1896, London, Williams & Norgate, pp. 146.
- Q. Newman, *Notas sueltas sobre la Pena de Muerte*, con un Apéndice de F. H. Bradley, Santiago de Chile, Imprenta i Encuadernacion Barzelona, 1896, pp. xii., 228.

VIII.—PHILOSOPHICAL PERIODICALS.

BRAIN. Parts LXX., LXXI. and LXXII. 1895. **Sir William Broadbent.** 'Brain Origin.' [Speculations on the nature of nervous processes.] **A. D. Waller.** 'Points relating to the Weber-Fechner law. Retina; Muscle; Nerve.' [Relation between intensity of light thrown into frog's eye and amount of negative variation of current between optic nerve and cornea; between strength of induction shock from condenser and lift of muscle; between strength of tetanising current applied to nerve and amount of negative variation of nerve. Logarithmic relation in first and second cases, direct proportionality in the case of nerve.] **A. E. Wright.** 'On the nature of the physiological element in emotion.' [Speculations on "neural tension" as chief element in emotion; analogy of segment of nervous system with water cistern; overflowing into viscera.] Discussion on 'Imperative ideas,' by **Dr Hughlings Jackson, G. H. Savage, C. Mercier** and **J. Milne Bramwell, L. Bianchi.** 'The functions of the Frontal Lobes.' [Experiments showing psychical defect after extirpation of frontal lobes in monkeys and dogs. Affections of trunk movements not constant and when present transitory.]

PHILOSOPHICAL REVIEW. Vol. v. No. 1. **A. Hodder.** 'Truth and the Tests of Truth.' [No warrant for the ascription of truth to our beliefs is given by induction, deduction, intuition, memory or inference. Truth is a certain sort of stability or predominance. As 'aids to reflection' in the pursuit of truth the collective intelligence has thrown off five logical devices.] **E. Albee.** 'The Relation of Shaftesbury and Hutcheson to Utilitarianism.' [Hutcheson's relation is much the nearer. Both systems—carefully appreciated by the writer—suffer by comparison with a type of ethical theory under which they do not properly fall.] **T. W. Taylor.** 'The Conception of Morality in Jurisprudence.' [The jurist conceives of the law as absolute, and of morality as a code of rules. While this conception may suffice for the judge, the theoretical jurist must base his theory upon a sounder ethics.] **J. H. Tufts.** 'Refutations of Idealism in the "Lose Blätter."' Discussion: **W. M. Daniels.** 'Mr Balfour's Criticism of Transcendental Idealism.' Reviews of Books. Summaries of Articles. Notices of New Books. Notes: **H. N. Gardiner.** 'Recent Discussion of Emotion.'

PSYCHOLOGICAL REVIEW. Vol. III. No. 1. **G. S. Fullerton.** 'Psychology and Physiology.' [Criticism of physiological usage (Foster) of psychological concepts. Warning to psychologists not to follow physiology for physiology's sake.] **H. Münsterberg.** 'Studies from the Harvard Psychological Laboratory. (III.)' (1) **W. G. Smith.** 'The Place of Repetition in Memory.' [The results "confirm in general the accepted

fact of the efficacy of continued repetition in impressing any kind of subject-matter on the memory." No definite connexion is traceable between excellence of memory and mode of reproduction.] (2) **M. W. Calkins**. 'Association. (II.)' [Frequency is the most constant condition of suggestibility. It is compared with recency, vividness and primacy.] (3) **L. M. Solomons**. 'The Saturation of Colours.' [Colours vary in colour-tone, saturation, intensity and blackness. The saturation of a mixture of colour and white is independent of the intensity and of the quantity of colour, and depends only on the ratio of the colour to the white.] (4) **J. B. Hylan**. 'Fluctuations of the Attention. (I.)' [Oscillation of two grey spots, indirectly seen, with varying direction of attention. Oscillations of touch and temperature sensations.] Discussion and Reports. **C. A. Strong**. 'Physical Pain and Pain Nerves.' [Reply to Marshall and Nichols.] **J. Jastrow**. 'Community of Ideas of Men and Women.' [Remarks on the Wellesley College results. The contradiction of the writer's by them is only apparent.] **C. L. Franklin**. 'The Function of the Rods of the Retina.' [von Kries has ignored the writer's priority in the hypothesis that the rods are the organs of brightness sensation.] **W. M. Urban**. 'Something more about the "Prospective Reference" of Mind.' **J. H. Hyslop**. 'Our Localisation in Space.' [Two cases of mistaken apprehension of situation.] **W. Lay**. 'Three cases of Synæsthesia.' Psychological Literature. Notes.

AMERICAN JOURNAL OF PSYCHOLOGY. Vol. VII. No. 2. **C. A. Scott**. 'Sex and Art.' [Bases "the connection on the one hand, the equivalence and interchangeability on the other, of the sexual passions (including the anger-fears) and the more intellectual instincts of art, religion, and the interests and enthusiasms generally, upon the fundamental quality of erethism found in every animal cell. The psychological expression of this bodily state is traced from its simplest manifestation, through animal combat and courting, the courting of the lower races, and the ensuing and accompanying religious, dramatic, and otherwise symbolic phenomena of phallicism (all to be regarded as essentially subdivisions of courting) to the more complex conditions of modern times.... Modern art is represented as being the psychical expression of an erethism which is an equivalent, and historically a derivative, of that of sex." An important paper, whose chief defects are a too great reliance upon secondary authorities, and a too unhesitating acceptance of biological theory as biological fact.] **H. Griffing**. 'On the Development of Visual Perception and Attention.' [Experiments on school-children regarding the range of visual attention (extensive limen of attention). The range is a function of individual growth. The chief value of the results lies, as the writer sees, in the indications they give of the complexity and difficulty of the subject investigated.] **A. Allin**. 'The "Recognition Theory" of Perception.' [Criticism of the doctrine of Höfding, Wundt, Sully, Spencer, Ward, etc., etc.] **A. Allin**. 'Recognition.' [Somewhat disjointed remarks upon the process of recognition in general. Good points made are that a centrally excited sensation is not necessarily memorial, that recognition is of the object and not of the sensation, etc. Both papers should be read in connexion with the writer's doctorate thesis: *Ueber das Grundprincip der Association* (physiological continuity).] Reviews. Notes.

REVUE PHILOSOPHIQUE. Vingtième Année, No. 11 (Novembre, 1895). **B. Perez**. 'Le Développement des idées abstraites chez l'enfant.' [Discusses, with abundant examples, the best mode of training children in the use of general terms. The method is in substance that of Socrates,

modified to suit the requirements of the child-mind.] **A. Forel.** 'Activité cérébrale et conscience.' [Maintains, as against M. Jules Soury, that we ought to distinguish sharply between consciousness and mere formal subjective attitude, and the special content of consciousness with its various modifications.] **G. Richard.** 'La Sociologie ethnographique et l'Histoire: leur opposition et leur conciliation.' [The essential data of Sociology are historical rather than ethnographical. The ethnographical data possess value only in so far as they can be brought into connexion with historical. Two general doctrines attributed to those sociologists who rely mainly on Ethnography, are subjected to a searching criticism,—the doctrine that only war and conquest have produced high social organisation of extensive communities, and the doctrine that industrial and intellectual civilisation can in the first instance develop only in states of this type. An important and instructive article.] **H. Lachelier.** 'La Théorie de l'induction d'après Sigwart. (I.)' [Contains an exposition of Sigwart's general theory of knowledge, of his account of the essential nature of inductive reasoning, and of the determination, first of concepts and secondly of laws, by inductive process.] *Analyses et comptes rendus, &c.*

No. 12 (Décembre, 1895). **J. Soury.** 'Le lobe occipital et la vision mentale.' **H. Lachelier.** 'La Théorie de l'induction d'après Sigwart. (Fin.)' [Discusses Sigwart's account of the application of the inductive method in Psychology. In summing up, M. Lachelier notes three points as of primary importance in Sigwart's general philosophy: (1) The mode in which the mind explains and comprehends reality is prescribed for it, not by the external world, but by its own nature. (2) The world which thought endeavours to render intelligible, is not the totality of our representations; it is a world of realities which are independent of us and exercise causal action, not only on each other, but on our mind. Though these realities are distinct in existence from the mind, and have their own laws, while the mind has its own laws, the mind can nevertheless understand them. Their laws are therefore in harmony with the laws of our thought. (3) Mental and material process determine each other in the way of interaction, and are not merely parallel. M. Lachelier urges that both the harmony of the laws of thought and the laws of reality, and the interaction between mind and matter, presuppose identity of nature. He also states a dilemma. We must choose between two conceptions of the relation between mind and reality; either we know nothing *a priori*, or we know prior to experience everything which can render experience intelligible. He also criticises the theory that mind and body interact, on the ground that, if they are alike in nature, there can be no essential difference between the action of bodies on one another, and the interaction between material atoms and the mind.] *Revue Critique:* **E. Durkheim.** 'L'Origine du mariage d'après Westermarck.' [The value of Westermarck's work is marred by his failure to analyse the conception of marriage, so as to give it a definition which has real sociological significance. Permanent union is not marriage unless its permanence is secured by the formal sanction of society. Durkheim holds with evident reason that marriage and what we call the family, did not exist in the most primitive society.]

Vingt-et-Unième Année, No. 1 (Janvier, 1896). **A. Fouillée.** 'L'hégémonie de la science et de la philosophie.' [In France, England, Germany, and America, there is at the present day a tendency to disparage science and philosophy as inadequate to the needs of humanity. The view taken seems to be that, though science may be a good servant, it is a bad master. M. Fouillée maintains, in opposition to this movement, the hegemony of science and philosophy; only we must, according to him, take a higher view of the nature and function of science. Philosophy and science are

not only speculations, they are modes of human activity; and they ought to become so in a still higher degree. The truth after which we are to seek must be a harmony of actions and ideas.] **E. Egger.** 'Le moi des mourants.' [Discusses the cases in which persons suddenly confronted with death review the events of their life as a whole. A psychological explanation is suggested.] *Observations et Documents:* **Ch. Féré.** 'Le langage réflexe.' **Duprat.** 'Expériences sur une illusion visuelle normale.' *Revue Générale, &c.*

REVUE DE MÉTAPHYSIQUE ET DE MORALE.—4^e Année, No. 1.—Janvier, 1896. **E. Batallion.** 'Louis Pasteur.' [An encomiastic article on the late M. Pasteur which will, we have no doubt, be interesting to Biologists and Physiologists, and indeed to all who like to read of one who was a great man of science, though not a philosopher.] **L. Weber.** 'Idées concrètes et images sensibles.' [There is a class of ideas which one may term 'singular ideas,' related to singular objects—unique in their kind—denoted by proper names. These 'singular' ideas possess a reality independent of the image of the person referred to by the proper name. What is the nature of the idea itself? The essay then proceeds to answer this question. The word 'idea' being explained, it is stated that the *external* world, the world of beings and real events, is composed of 'ideas,' signified by words, as the *ideal* world is composed of concepts and abstractions. There is a Real which is unknowable; but it is not substance, not thing-*per-se*, not absolute. The form in which our intelligence and reason realise themselves precludes the possibility of ever knowing it. A highly mystical piece of metaphysics.] **G. Noël.** 'La Logique de Hegel.' [Hegel is not, like Descartes and Kant, one who would revolutionise thinking, or break with the past. Rather, he would make the history of systems show that all are part of one system in which thought is evolving. Yet Hegelianism is not eclecticism. Neither is it a return to the dogmatism condemned by Kant, especially, as some say, to that of Spinoza. Noël investigates the questions, first, how far Hegel deserves to be called a Spinozist, and second, whether he has been unfaithful to the fundamental thought of 'criticism.' He defends him against both charges, and ends by declaring that we must either advance beyond Kant to Hegel, or go back again to the position of Hume. These articles of Noël on Hegel and his critics are interesting, not only for their own sakes, but also as indicating how largely the philosophy of Germany—or what for some decades had been so—*par excellence* has fascinated the French mind, while there seems to be at present passing over German speculation a wave of influence derived from the positivism of France.] **F. Halévy.** 'Travaux récents relatifs à Socrate.' *Questions pratiques, &c.*

REVUE NÉO-SCOLASTIQUE. Février, 1896. **Dr H. Hallez.** 'Le temps et la durée.' [Dr Hallez, in the course of a very ingenious but perhaps somewhat paradoxical paper, maintains that time is a sensible image representative of concrete duration.] **Domet de Vorges.** 'L'objectivité de la connaissance intellectuelle.' [M. Domet de Vorges, though little known in England, has achieved much reputation in France as one of the ablest among the many able men who are endeavouring to revive the study of Scholasticism in that country. In the present article M. de Vorges is less concerned to establish the objective value of intellectual knowledge than to determine the mind of St Thomas on this question. The article is in consequence primarily of historical interest. Still it contains much that deserves the attention of the student of philosophy.] **G. de Craene.** 'Nos représentations sensibles intérieures.' [M. Taine's treatise *De l'Intelligence* has provoked much discussion in France and has elicited many replies

from the advocates of 'la philosophie spiritualiste.' Amongst these replies is one from M. de Craene which is now in the Press. The present article is an extract from that reply, published in advance.] **Ch. Sentroul.** 'Le Socialisme et la question agraire.' [M. Sentroul, in an article of some interest, discusses the attitude towards the land question of the various Socialist Congresses.]

As an appendix to the *Revue Néo-Scholastique*, there is published what would seem to be an exhaustive list of treatises and articles bearing on Philosophy that have recently appeared on the Continent and in England.

ZEITSCHRIFT FÜR PHILOSOPHIE UND PHILOSOPHISCHE KRITIK. Neue Folge, Band 107, Heft 2. **H. Siebeck.** 'Platon als Kritiker aristotelisches Ansichten: der *Philebus*.' [This is a continuation, with reference to the *Philebus*, of an attempt made by Siebeck in a former article, with reference to the *Parmenides*, to show that Plato criticised certain of Aristotle's views published during his master's lifetime—a fact in which we may find a clue to the interpretation of some of the Platonic dialogues. "The *Protrepticus* (one of the earliest Aristotelean writings) may be regarded as having been the immediate motive for the composition of the *Philebus*." Dr Siebeck, as was to be expected, defends his position with a wealth of learning and ingenuity, and these articles are very original and suggestive.] **Julius Bergmann.** 'Ueber Glaube und Gewissheit.' [This paper seeks to answer the question—wherein consists the certainty which belongs to faith in the stricter sense? and leads to the conclusions (a) that the understanding, or reason, alone can decide whether anything is true or untrue, certain or uncertain; (b) yet that a belief possessing certainty which is not knowledge, but an anticipation of knowledge, is possible; (c) and that the 'heart' (Gemüth) exerts an influence upon the understanding, and shows it the way to knowledge.] **Georg Simmel.** 'Friedrich Nietzsche: eine moral-philosophische Silhouette.' **Matthias Szilávik.** 'Zur Geschichte und Literatur der Philosophie in Ungarn.' **Josef Müller.** 'Das Erinnern.' ["In the process called 'recollecting' ideas are not fetched back from the unconscious and then arrayed in the garb of consciousness: they have not really expired at all: they were only pushed aside, a little; by the rushing stream of the mental life; they do not, again, spring up of themselves—they have no such independence—but the Soul accomplishes this, reproducing them, according to its interest in them, and in conformity with the laws of Similarity and Contiguity. Hence the Logic of Memory. It takes a deeper hold of Rules than of examples: forgets names before facts: parts before the whole, &c. The 'Ich' is no 'hook,' on which thoughts are simply hung; it is the active, ordering, principle in all mental functions; only many a piece of business is transacted in certain inferior offices and by-apartments, which however are all under the supervision of the general management and with it make up the united personality. Hence to 'recollect' is (1) to observe or notice, not to revivify or create; (2) it is a logical judgment which, like every act of thought, can err, so that there may be a false memory; (3) it is an act of the united Soul, to which as its accidents the ideas adhere." An interesting article, which—whatever we may think of the writer's conclusions—seems to have been written by one who is competently acquainted with the best and latest works on the subject of Memory.] **Karl Vorländer.** 'Demokrit's ethische Fragmente, ins Deutsche übertragen.' [A piece of work of permanent value for the student, which only want of space prevents us from noticing at length.] Recensionen, Notizen, &c.

KRAEPELIN'S PSYCHOLOGISCHE ARBEITEN. Bd. 1., Heft 2 and 3. **G. Aschaffenburg.** 'Experimentelle Studien über Associationen.' [Experi-

ments on the associations occurring in response to given words with and without time measurement. Qualitative analysis of associations, using a modification of Wundt's classification. Individual differences in character and grammatical form of associated words. Ideas common to different individuals noted. Scheme for classification at end of paper.] **E. Amberg.** 'Ueber den Einfluss von Arbeitspausen auf die geistige Leistungsfähigkeit.' [Chief result that a pause of 15 minutes in the middle of an hour's mental work has a less beneficial effect than one of five minutes. Difference ascribed to loss of a factor in the former case which is termed "Anregung." This is a name for the process by which the inertia of the organism on beginning work is overcome and is regarded as furnishing a third important factor in addition to fatigue and practice in determining the form of a curve of mental work.] **A. Hoch** and **E. Kraepelin.** 'Ueber die Wirkung der Theebestandtheile auf körperliche und geistige Arbeit.' [Investigation by means of ergograph and addition method on respective influence of caffeine and ethereal oils of tea. Describes a modification of Mosso ergograph. Chief results that favourable influence of caffeine on muscle work is due to direct action on muscle substance. Unfavourable effect of ethereal oils central. Beneficial effect of both on process of association. The paper contains important contributions to methods of estimating effects of practice, fatigue, and "Anregung," of analysing muscle fatigue curves, of examining individual differences in capacity for mental work, etc.]

VIERTELJAHRSSCHRIFT FÜR WISSENSCHAFTLICHE PHILOSOPHIE. Jahrgang XIX., Heft 4. **J. Kodis.** 'Die Anwendung des Functionsbegriffes auf die Beschreibung der Erfahrung.' **A. Plotz.** 'Ableitung einer Rassenhygiene und ihre Beziehungen zur Ethik.' **F. Blei.** 'Die Metaphysik in der Nationalökonomie.' **R. Wlassak.** 'Bemerkungen zur allgemeinen Physiologie.' Anzeigen, &c.

ZEITSCHR. F. PSYCH. U. PHYSIOL. D. SINNESORGANE. Bd. IX. Heft 3 and 4. **H. Ebbinghaus.** 'Ueber erklärende und beschreibende Psychologie.' [Dilthey has laid it down, in his *Ideen über eine beschreibende und zergliedernde Psychologie*, that psychology can never be more than descriptive and analytic, and that recent attempts to make it explanatory and constructive are wrong in principle and have led to nothing but confusion of opinion in fact. The writer shows that Dilthey's polemic does not touch the 'explanatory' psychologists, with the possible exception of Herbart—who is 'very, very dead'; that many of the rules laid down are recognized as overtly by explanatory psychology as they could be by a descriptive psychology planned after Dilthey's suggestions; and that Dilthey has failed—as explanatory psychology has not failed—to see where the real difficulty of psychology lies.] **G. Simmel.** 'Skizze einer Willentheorie.' [Action does not follow upon will or impulse: will is the 'conscious aspect,' the 'feeling reflection' of the first stage in the processes of innervation which culminate in bodily action; i.e. it is the conscious representation of action begun.] **G. Heymans.** 'Quantitative Untersuchungen über das "optische Paradoxon."' [Quantitative experiments upon various forms of the arrow head and feather (Müller-Lyer) illusion. Explanation in terms of eye-movement, based upon the explanations of Wundt and Delbœuf.] Besprechungen. [Review of Höffding's *Psychology by Höfer*, etc.] Litteraturbericht. Berichtigung.

Bd. IX. Heft 5 and 6. **Karl Groos.** 'Zum Problem der unbewussten Zeitschätzung.' [The phenomena to be explained are those of waking regularly at the same hour, of post-hypnotic execution of commands the

time of which was suggested only in the abstract, etc. The author believes that attention is always an expectation, never a realisation; and that there are three forms of it,—motor (expectation of an instinctive or voluntary movement); theoretic (of an ideational connexion); and æsthetic (of an enjoyment). He is thus able to refer the time estimations to unconscious or subconscious attention.] **S. Ottolenghi.** 'Das Gefühl und das Alter.' [General sensibility (measured by the interrupted current) is fairly well developed in children. It reaches its maximum in adult life, differing, however, with occupation, degeneration, etc. It decreases again in old age. Pain sensitivity is very little developed in children, reaches a maximum in adult life, and decreases but little with old age.] **W. Heinrich.** 'Die Aufmerksamkeit und die Funktion der Sinnesorgane. (I.)' [If objects in the lateral field of vision are attended to, the accommodation of the eye changes: Helmholtz' statement to the contrary is incorrect. During attention to non-visual impressions, the eye is unaccommodated. The ocular changes stand in a direct correlation with the phenomena of attention. Oscillations of visual attention can be adequately explained from peripheral causes.] *Litteraturbericht.* Bibliographie der psychophysiologischen Litteratur des Jahres 1894. [1504 titles.] *Berichtigung.*

Bd. x. Heft 1 and 2. **G. E. Müller.** 'Zur Psychophysik der Gesichtsempfindungen. (I.)' [Seeks to modify the theory of antagonistic colours in such a way as to render unnecessary the statement of its author (Hering) that "psychophysical processes of very different magnitude may give the same sensation, since everything depends not upon the absolute magnitude of these processes, but upon their mutual relation." Five psychophysical axioms are formulated. (1) Every conscious state has as its substrate a material (psychophysical) process. (2) Likeness and difference of sensations correspond to likeness and difference of nature in the psychophysical processes, and *vice versa*. (3) Alteration in a given direction on either side means alteration in the same direction on the other. (4) Qualitative or intensive changes on either side mean qualitative or intensive changes on the other. (5) The fifth axiom is a determination, in the shape of a functional formula, of the relation of a mixed sensation (quality) to its component simple sensations (intensity and quality). The writer goes on to discuss the intensity and power of sensations, and qualitative sensation series and their psychical representation. Then, making special applications of his conclusions to the sense of sight, he deduces the six retinal 'fundamental processes,' which agree with those assumed by Hering. The position of the six fundamental colours in the colour system is next examined, with especial reference to language (Wundt, etc.).] **Guillery.** 'Ueber das Augenmass der seitlichen Netzhauttheile.' [There is no essential difference between central and peripheral eye-measurement. Weber's law does not hold for peripheral.] **A. Höfer.** 'Krümmungskontrast.' [A case of architectural curvature-contrast, which hardly admits of the possibility of explanation by a physiological theory (Hering). Suggestion of explanation in terms of the distinction of primary (given) and consolidated contents (Meinong).] *Litteraturbericht.* *Berichtigung.*

IX.—NOTES.

REPLY TO A CRITICISM.

I AM sorry that it should be in *Mind* that I again violate my rule never to reply to book-reviews, for nowhere else did I ever do it: but I find in Prof. Sully's notice of my book on *Mental Development* in the last number some things on which our common readers should be set right. Passing over the 'moral' charges which Prof. Sully finds it in his province to make—which will do no objective harm, I hope; but may do me subjective good—I wish to state a point or two in answer to Prof. Sully's criticisms of the actual teachings of my book.

He makes the general charge that I do not credit other (save American) writers sufficiently; and says, apropos of the charge, that my reference to Wundt on the attention is inadequate: that my theory is 'strikingly similar in its essentials' to Wundt's "well-known view." To this I say: So far from being 'strikingly similar' to any one of the phases of his theory which Wundt has developed in his different editions, it is nearer to the theories of the Münsterberg-Lange type: and either Prof. Sully does not know his Wundt or he has not read with care the book he is criticising. A little work just published by Heinrich¹ will bear (cautious) citation on Wundt's theories of the attention.

Again, in criticising my experiments on the color-perception of infants, he mistakes the problem I set myself, thinking that I mean color-preference and color-discrimination, in spite of detailed criticisms of mine directed *precisely* against this confusion². He thinks that I showed two colors simultaneously to the child; while in my book I say: "On this second rod the colors were placed *in succession*, the object being to excite the child to reach for *the color*" (singular, not plural: Italics put in now). p. 51. Prof. Sully has repeated this criticism more explicitly in other places and now publishes it again in his book.

As to the 'novelty' of my use of the word 'suggestion' Prof. Sully would have done well to quote the whole of my definition instead of half of it; I go on to say: "and it is typified by the abrupt entrance from without into consciousness of an idea or image &c."—and this is separated only by a comma from the part quoted by Prof. Sully. And it might have been fairer also to refer to the sections in which I compare and comment on four other views. Moreover, reference to the English authorities whose absence from the foot-notes of the book my critic so much deplores will show him that my whole chapter on suggestion is based on a view similar

¹ *Die moderne physiolog. Psychologie in Deutschland*, p. 80.

² *Ment. Devel.* p. 39 f.

to that given in Tuke's *Dictionary of Psychological Medicine*¹—the common view developed by Bernheim, to whom I directly refer.

These cases are enough to show the depth of the review. The criticisms of my views on 'imitation,' 'volition,' &c. are just as superficial. For example—again at random—take volition. Prof. Sully says: "In truth the writer seems himself to see that imitation is not the only, if indeed the chief source of volition, when he writes, &c."; and does not hint at the long argument (pp. 426 ff.) in which I deal with the very instance which he goes on to cite, and show that it illustrates one of the main distinctions—that between ontogeny and phylogeny in development—which my book aims to make good. In this case he seems to me to proceed by insinuation entirely.

Indeed the whole performance, as I can not help thinking, comes back to its point of origin, certain moral charges.

Now I may only ask whether it is a sufficient or a competent bid for the reader's prejudgment to say that I am a 'young American,' 'impatient for ideas more than a year old,' and deal in 'curious diagrams.' And then I may suggest the consideration that confessed 'irritation' is not a good psychosis from which to write things for a journal of the reputation of *Mind*,—all of which Prof. Sully's own better taste would seem to confirm by this sentence: "I have felt bound to enlarge on these obstacles which the author has put in the way of a clear understanding and a fair estimate of his book; for it is quite possible that I have not surmounted them and that the opinion of the work which I have done my best to form may turn out to involve a certain amount of misapprehension."

J. MARK BALDWIN.

A few words will, I think, suffice by way of rejoinder to Prof. Baldwin's objections to my review of his book.

(1) On reperusing his account of the mechanism of attention in increasing the intensity of sensations I agree with him that his theory is not 'strikingly similar' to that of Wundt as I had erroneously said. But the author is, I think, responsible for my error. In the note which I refer to, when quoting from a letter of Prof. Höfding (*Mental Development*, p. 463) a view of the matter which appeared and still appears to me essentially similar to that of Wundt, he uses with respect to this view the words "which clearly takes the same ground as to the cause of heightened intensities" (as his own). Taking his own interpretation of Höfding's view as correct I naturally wondered at his merely referring to Höfding's allusion to Wundt rather than appealing to Wundt directly.

(2) I did not, as Prof. Baldwin says that I did, speak of his showing two colours to his child simultaneously. My words were (*Mind*, V. n. s. pp. 98, 99): "by presenting successively in suitable situations certain colours." If I have elsewhere made the mistake which he speaks of, I will correct it: though I fail to see what it has to do with the point of my criticism.

(3) In quoting Prof. Baldwin's definition of suggestion I completed the definition as quoted by himself from an article of his own in *Science*. He complains that I did not go on and quote another quotation also from himself which does not fall grammatically under the words: "I have myself defined suggestion," but is introduced by the words: "and it is typified etc." I fail to see Prof. Baldwin's grievance. For the rest

¹ Art. *Suggestion*. See also Tuke's *Influence of the Mind on the Body*.

it seems to me that Prof. Baldwin's present contention that his view of the process of suggestion is based on another view reads oddly after the chapter referred to (Chap. VI.), which after reading it again in the light of the above note still seems to me to make a very distinct claim of originality for what the writer expressly calls "my view."

(4) With respect to Prof. Baldwin's objections to my criticism of his theory of Imitation I am ready to allow that the words I used, "seems himself to see," hardly do justice to his position. My point was that after trying apparently to make imitation serve as the single source of volition in individual development he finds himself compelled to allow something to that play of chance or accident which, as I understand him, he had before been so resolutely excluding. I did not mean to say that he made these concessions inadvertently, though I now see that my language might bear this interpretation.

(5) I have brought no "moral charges" against Prof. Baldwin. I spoke of moral *difficulties* so as to distinguish them from the intellectual ones dealt with in the first paragraph of my review. The phrase, I should have supposed, was sufficiently clear. If Prof. Baldwin prefers to give extracts from his own previously published and accessible books much more frequently than extracts from any other authority he is likely to raise a prejudice in people whom he might regard as weakly old-fashioned. Such a prejudice would constitute a moral as distinguished from an intellectual difficulty in the way of those persons' comprehension of his meaning; though they would not of course be justified on the ground of this difficulty in accusing him of not being moral. I can only express regret that any words of mine could have seemed to Prof. Baldwin to imply moral charges.

As to Prof. Baldwin's remarks on my confession of a sense of these difficulties and (by implication) of a certain feeling of irritation, I cannot see how this unfortunate experience of mine amounts to a hardship for Prof. Baldwin. Does he mean to suggest that when a reviewer feels difficulties of this kind he ought to retire in favour of somebody less squeamish? And is he as an editor of opinion that such an arrangement would best conduce to the true interests of Science?

J. SULLY.